Mellerson, Kendra

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Name=KRISHNAN MENON

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Artunit=1723

Office=REM 7D60

SerialNum=09/912,627

PatClass=

Earliest=8/1/2000

Format1=paper

Format3=email

Searchtopic=NPL SEARCH FOR CLAIMS, PARTICULARLY 1,12,15,29 AND 52.

SPECIFIC TERMS FOR SEARCH:

CHITOSAN, PERLITE, ULTRAFINE SILICA OR ALUMINA, SUPPORT (PERLITE, CERAMIC, SILICA, ETC) TREATED BY OXALIC ACID BEFORE COATING WITH CHITOSAN.

Comments=CONTACT TIME: 9-5 WEEKDAYS.
PHONE OR E-MAIL.

send=SEND

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=> file reg
FILE 'REGISTRY' ENTERED AT 22:13:44 ON 06 MAR 2005
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=> display history full l1-


     FILE 'REGISTRY' ENTERED AT 21:59:41 ON 06 MAR 2005
                  E OXALIC ACID/CN
L1                1 SEA "OXALIC ACID"/CN
                  E CHITOSAN/CN
L2                1 SEA CHITOSAN/CN
                  E SILICA/CN
L3                1 SEA SILICA/CN
                  E ALUMINA/CN
L4                1 SEA ALUMINA/CN
                  E PERLITE/CN
L5                1 SEA PERLITE/CN

     FILE 'HCA' ENTERED AT 22:03:34 ON 06 MAR 2005
L6            47195 SEA L1 OR OXALIC#(A)ACID# OR HO2CCO2H OR HOOCCOOH OR
                    COOH(W)2
L7            18237 SEA L2 OR CHITOSAN#
L8           678374 SEA L3 OR (SILICON OR SI)(W)(OXIDE# OR DIOXIDE#) OR
                    SILICA# OR SIO2
L9           477303 SEA L4 OR (ALUMINUM# OR AL)(W)(OXIDE# OR TRIOXIDE#) OR
                    ALUMINA# OR AL2O3
L10            8515 SEA L5 OR PERLITE#
L11          301863 SEA CERAMIC?

     FILE 'LCA' ENTERED AT 22:03:39 ON 06 MAR 2005
L12            4702 SEA BIOSORB? OR BIOSORP? OR SORB? OR SORP? OR ADSORB? OR
                    ADSORP? OR ABSORB? OR ABSORP? OR CHEMISORB? OR CHEMISORP?

     FILE 'HCA' ENTERED AT 22:05:02 ON 06 MAR 2005
L13             110 SEA L6 AND L7
L14               0 SEA L13 AND 57/SC,SX
L15               6 SEA L13 AND (59 OR 60 OR 61)/SC,SX
L16          103851 SEA (HEAVY# OR TOXIC? OR WASTE#)(2A)METAL####
L17               6 SEA L13 AND L16
L18              13 SEA L13 AND L8
L19               5 SEA L13 AND L9
L20               0 SEA L13 AND L10
L21               4 SEA L13 AND L11
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L22          30 SEA L13 AND L12
                E COATINGS/CV
L23       43471 SEA "COATING(S)"/CV OR COATINGS/CV
                E COATING MATERIALS/CV
L24      257257 SEA "COATING MATERIALS"/CV
                E COATING PROCESS/CV
L25      117100 SEA "COATING PROCESS"/CV
L26          10 SEA L13 AND (L23 OR L24 OR L25)
L27          31 SEA L15 OR L17 OR L18 OR L19 OR L21 OR L26
L28          16 SEA L22 NOT L27
L29          14 SEA L22 AND L27
L30          31 SEA L27 OR L29
L31          63 SEA L13 NOT (L30 OR L28)
L32          17 SEA L30 AND (1900-2000/PRY OR 1900-2000/PY)
L33          15 SEA L28 AND (1900-2000/PRY OR 1900-2000/PY)
L34          49 SEA L31 AND (1900-2000/PRY OR 1900-2000/PY)
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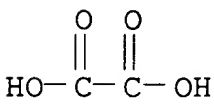
L32 ANSWER 1 OF 17 HCA COPYRIGHT 2005 ACS on STN
136:371190 Aluminum alloy heat exchangers coated with hydrophilic coatings for resistance to tobacco odor impregnation. Hamamura, Kazunari; Kobayashi, Kengo; Sugawara, Hiroyoshi; Kasebe, Osamu; Uchiyama, Kazuhisa (Nihon Parkerizing Co., Ltd., Japan; Denso Corporation). Eur. Pat. Appl. EP 1205523 A1 20020515, 12 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2001-309487 20011109. PRIORITY: JP 2000-344173 20001110.

AB An aluminum alloy heat exchanger resistive to impregnation of tobacco odor includes a base body of an aluminum alloy heat exchanger and an org. hydrophilic coating layer formed on the surface of the heat exchanger base body, and including a component (A) contg. a **chitosan** compd. selected from **chitosan** and derivs. thereof, and a component (B) contg. a carboxylic compd. having two or more carboxyl groups per mol. thereof, in a total solid amt. of the components (A) and (B) of 20% by mass or more, based on the total amt. by mass of the org.

hydrophilic coating layer.

IT **144-62-7, Oxalic acid,** uses
9012-76-4, Chitosan 9012-76-4D,
Chitosan, glycerylated
(aluminum alloy heat exchangers coated with hydrophilic coatings for resistance to tobacco odor)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM C09D105-08
ICS C23C022-56; F28F013-18
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 56

IT **Coating materials**
(hydrophilic coatings; aluminum alloy heat exchangers coated with hydrophilic coatings for resistance to tobacco odor)

IT 77-92-9, Citric acid, uses 88-99-3, Phthalic acid, uses 89-05-4, Pyromelliticacid 97-65-4, Itaconic acid, uses 110-15-6, Succinic acid, uses 110-16-7, Maleic acid, uses 110-17-8, Fumaric acid, uses 110-94-1, Pentanedioic acid 111-16-0, Heptanedioic acid 123-99-9, Nonanedioic acid, uses 141-82-2, Malonic acid, uses **144-62-7, Oxalic acid,** uses 505-48-6, Octanedioic acid 517-60-2, Mellitic acid 526-83-0, Tartaric acid 528-44-9, Trimellitic acid 554-95-0, Trimesic acid 6915-15-7, Malic acid **9012-76-4, Chitosan 9012-76-4D, Chitosan,** glycerylated 31901-98-1, Naphthalenetetracarboxylic acid 51156-90-2, Butanetetracarboxylic acid 65891-27-2, Butanetricarboxylic acid 111324-43-7, Hexanetricarboxylic acid 119588-61-3, Butanedicarboxylic acid 223517-94-0, Cy-clohexanetetracarboxylic acid
(aluminum alloy heat exchangers coated with hydrophilic coatings for resistance to tobacco odor)

L32 ANSWER 2 OF 17 HCA COPYRIGHT 2005 ACS on STN
136:314371 Composite **biosorbent** for treatment of waste aqueous system(s) containing **heavy metals.** Boddu, Veera M.; Smith, Edgar Dean (USA). U.S. Pat. Appl. Publ. US 2002043496 A1

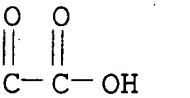
20020418, 11 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-912627 20010724. PRIORITY: US 2000-PV222180 20000801.

AB A **biosorbent** compn., process of prepg. and use thereof wherein the **biosorbent** compn. comprises a **chitosan** -coated substrate. Useful substrates include support materials such as a **ceramic** support material. The **biosorbent** compn. of the instant invention is useful in treating aq. systems, including wastewater and aq. waste streams, by removing undesired **heavy metals.** The **biosorbent** of the instant invention is useful for the treatment of wastewaters, including wastewaters from metal plating facilities, groundwater contaminated with hexavalent chromium and other metals, wastewaters from nuclear power plants contg. cesium, thorium and uranium, waste waters such as mercury contaminated water from dental offices, storm waters and drinking water/waste streams contaminated with lead, mercury and arsenic.

IT **1344-28-1, Alumina,** uses
(**chitosan**-coated; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
RN 1344-28-1 HCA
CN Aluminum oxide (Al2O3) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **9012-76-4, Chitosan**
(coated onto **ceramic**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **144-62-7, Oxalic acid,** uses
(composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IC ICM B01D039-00
NCL 210490000
CC **60-3** (Waste Treatment and Disposal)
Section cross-reference(s): **61**
ST **chitosan biosorbent** wastewater treatment **heavy metal**; water purifn **chitosan biosorbent**

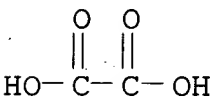
IT **Sorbents**
(**biosorbents**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT **Heavy metals**
(composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT Wastewater treatment
Water purification
(**sorption**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT **Heavy metals**
(**toxicity**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT **1344-28-1, Alumina**, uses
(**chitosan**-coated; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT **9012-76-4, Chitosan**
(coated onto **ceramic**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT **144-62-7, Oxalic acid**, uses
(composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT 7440-29-1, Thorium, processes 7440-46-2, Cesium, processes 7440-61-1, Uranium, processes 14280-50-3, Lead ion pb2+, processes 14302-87-5, Mercuric ion, processes 14701-22-5, processes 15158-11-9, Cupric ion, processes 16065-83-1, Chromium ion cr3+, processes 17428-41-0, Arsenic ion as5+, processes 18540-29-9, Chromium ion cr6+, processes 22541-54-4, Arsenic ion as3+, processes
(composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)
IT 64-19-7, Acetic acid, uses
(for dissolving **chitosan**; composite **biosorbent** for treatment of waste aq. systems contg. **heavy metals**)

L32 ANSWER 3 OF 17 HCA COPYRIGHT 2005 ACS on STN
135:335192 Articles comprising cationic polysaccharides and acidic pH buffering means. Pesce, Antonella; Tordone, Adelia Alessandra; Carlucci, Giovanni; Di Cintio, Achille (The Procter and Gamble Co., USA). Eur. Pat. Appl. EP 1149593 A1 20011031, 20 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2000-108062 20000425.
AB The present invention relates to articles, preferably disposable

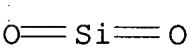
absorbent articles like sanitary napkins and panty liners, which comprise a cationic polysaccharide, typically chitin-based material and/or **chitosan** material, and an acidic pH buffering means. Such disposable **absorbent** articles deliver improved odor control performance even upon prolonged wearing time of the articles. A wet powder was prepd. by mixing **chitosan** pyrrolidone carboxylate powder and acidic pH buffering soln. (citric acid/sodium hydroxide 1:1, pH = 5) at a ratio of 1:10. The wet powder was homogeneously distributed between a feminine pad fiber layers which made the **absorbent** core.

IT **144-62-7, Oxalic acid,** biological studies **7631-86-9, Silica,** biological studies
(articles comprising cationic polysaccharides and acidic pH buffering means)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
(articles comprising cationic polysaccharides and acidic pH buffering means)

RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC A61L015-28; A61L015-46; A61L028-00
CC 63-6 (Pharmaceuticals)
ST **absorbent** cationic polysaccharide pH buffer; feminine pad **chitosan** pyrrolidone carboxylate buffer
IT **Absorbents**
Buffers
Chelating agents
Diapers
Gelation agents
Ion exchangers
Perfumes
pH
(articles comprising cationic polysaccharides and acidic pH buffering means)

IT Acids, biological studies
Clays, biological studies
Diatomite
Polymers, biological studies
Silica gel, biological studies
Zeolites (synthetic), biological studies
(articles comprising cationic polysaccharides and acidic pH buffering means)

IT 62-76-0, Sodium oxalate 64-19-7, Acetic acid, biological studies 65-85-0, Benzoic acid, biological studies 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 88-99-3, Phthalic acid, biological studies 110-94-1, Glutaric acid 124-04-9, Adipic acid, biological studies 127-09-3, Sodium acetate **144-62-7, Oxalic acid**, biological studies 463-79-6, Carbonic acid, biological studies 497-19-8, Sodium carbonate, biological studies 532-32-1, Sodium benzoate 868-14-4, Potassium hydrogen tartrate, biological studies 994-36-5, Sodium citrate 1310-73-2, Sodium hydroxide, biological studies 6100-20-5, Potassium tetroxalate dihydrate 7440-44-0, Carbon, biological studies **7631-86-9, Silica**, biological studies 7778-49-6, Potassium citrate 9003-04-7, Sodium polyacrylate 9005-25-8, Starch, biological studies 12619-70-4, Cyclodextrin 23311-84-4, Sodium adipate 29801-94-3, Potassium phthalate 32224-61-6, Sodium glutarate 66267-50-3 66267-52-5 84563-61-1 84563-62-2 84563-66-6 84563-67-7 84563-74-6 84563-75-7 84563-76-8 84563-77-9 84563-85-9 87582-10-3 91869-06-6 91869-07-7 109850-74-0 119519-57-2 119519-59-4 119519-60-7 119519-64-1 119519-66-3 119519-67-4 119519-69-6 119519-70-9 119519-73-2 119519-74-3 119519-77-6 119519-79-8 135322-32-6 266689-30-9 370088-61-2 370088-62-3 370088-63-4 370088-64-5 370088-65-6 370088-66-7 370088-67-8 370088-68-9 370088-69-0 370088-70-3 370088-71-4 370088-73-6 370088-75-8 370088-76-9 370088-77-0 370567-71-8
(articles comprising cationic polysaccharides and acidic pH buffering means)

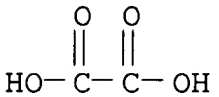
IT 1398-61-4, Chitin **9012-76-4, Chitosan** 117522-93-7
(articles comprising cationic polysaccharides and acidic pH buffering means)

L32 ANSWER 4 OF 17 HCA COPYRIGHT 2005 ACS on STN
134:267995 Preparation of **chitosan**. Qu, Ronglin; Du, Rongqian; Yu, Mingxi; Li, Desen; Ji, Mingyao; Zhao, Yushu (Tianjing Univ., Peop. Rep. China; Tianjing City Genetic Society). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1266855 A **20000920**, 3 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1999-119390 19990915.

AB **Chitosan** having low contents of ashes, **heavy**

metals, and Ca is prepd. from domestic maggots, pupae, or pupa shells. A simple process comprises cleaning, pulverizing, immersing in a <6% NaOH soln. at 80.degree.-100.degree. for 3-15 h to remove proteins and fats, sepg. to remove mouths and viscera, decoloring with a <0.6% KMnO4 soln. for 2-6 h, adding 0.3-3% **oxalic acid** to remove Mn, decalcifying with 0.5-2N HCl, cleaning, immersing in a 35-65% NaOH soln. at 65.degree.-140.degree. for 1-10 h for deacetylation, filtering or centrifugating, washing, and drying to obtain **chitosan**.

IT **9012-76-4P, Chitosan**
(prepn. of **chitosan** from maggots and pupae)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **144-62-7, Oxalic acid**, reactions
(prepn. of **chitosan** from maggots and pupae)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IC ICM C08B037-08
CC 44-5 (Industrial Carbohydrates)
ST **chitosan** manuf maggot pupa; decalcification deacetylation decolorizing **chitosan** manuf
IT Calcification
(decalcification; prepn. of **chitosan** from maggots and pupae)
IT Deacetylation
Decolorizing agents
Maggot
Pupa
(prepn. of **chitosan** from maggots and pupae)
IT **9012-76-4P, Chitosan**
(prepn. of **chitosan** from maggots and pupae)
IT 1310-73-2, Sodium hydroxide, uses
(prepn. of **chitosan** from maggots and pupae)
IT **144-62-7, Oxalic acid**, reactions
7647-01-0, Hydrogen chloride, reactions 7722-64-7, Potassium permanganate
(prepn. of **chitosan** from maggots and pupae)

L32 ANSWER 5 OF 17 HCA COPYRIGHT 2005 ACS on STN
134:50786 Electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel

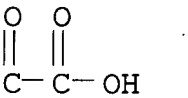
composite membrane. Zhao, Chang-zhi; Han, Mei; Ding, Bao-jin; Zhao, Guo-liang (School Chem. Eng., Dalian Univ., Dalian, 116012, Peop. Rep. China). Dalian Ligong Daxue Xuebao, 40(5), 550-553 (Chinese) **2000**. CODEN: DLXUEJ. ISSN: 1000-8608. Publisher: Dalian Ligong Daxue.

AB The electrode coated with **chitosan** encapsulated with Ru(bpy)32+/**silica** gel membrane was prepd. by sol-gel method and its electrochemiluminescent (ECL) characteristics were studied. The cyclic voltammograms of the coated Pt and glassy carbon electrode show their anodic peak potentials at 1150 and 1370 mV, cathodic peak potentials at 1050 and 1260 mV, resp. The surface of the coated electrode yields a fluorescence spectrum with a max. band of 585 nm. The coated electrode has the selectivities of potential and pH for the substrates. The ECL response time of the coated electrode has the selectivities of potential and pH for the substrates. The ECL response time of the coated electrode is 10 s after a suitable potential is applied. The correlation coeffs. of ECL response to **oxalic acid** and ascorbic acid are 0.995 and 0.992 in the concn. range of 5.5 .times. 10-4 to 1.0 .times. 10-2 mol L-1 with the detection limit of 5.0 .times. 10-5 and 6.4 .times. 10-5 mol L-1; the RSE is within 3.9% and 6.8% when n = 5, resp. The coated Pt and glassy carbon electrodes may continue to be used for 30 and 17 days resp. before the ECL response decreases to 80% of the initial value.

IT **144-62-7, Oxalic acid,** analysis
(electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4D, Chitosan,** Ru(bpy)32+-encapsulated
(electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

RN 9012-76-4 HCA

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 72, 73

ST electrochemiluminescence electrode ruthenium bipyridyl encapsulated **chitosan silica** composite coating

IT Sol-gel processing

(coating; in prepn. of Ru(bpy)32+-encapsulated **chitosan /silica** gel composite coating for electrochemiluminescence anal.)

IT **Silica** gel, analysis
(electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

IT Luminescence, chemiluminescence
(electrochemiluminescence; electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/ silica** gel composite membrane)

IT Cyclic voltammetry
Redox potential
(of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite coating for electrochemiluminescence anal.)

IT **Coating process**
(sol-gel; in prepn. of Ru(bpy)32+-encapsulated **chitosan /silica** gel composite coating for electrochemiluminescence anal.)

IT Electrodes
(voltammetric; electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

IT 50-81-7, Ascorbic acid, analysis 56-41-7, Alanine, analysis
56-86-0, Glutamic acid, analysis 71-00-1, Histidine, analysis
75-50-3, Trimethylamine, analysis 83-88-5, Riboflavin, analysis
147-85-3, Proline, analysis
(analyte and substrate; electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/ silica** gel composite membrane)

IT 7440-06-4, Platinum, analysis
(coated electrodes; electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

IT 7440-44-0, Carbon, analysis
(coated glassy carbon electrodes; electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan /silica** gel composite membrane)

IT **144-62-7, Oxalic acid,** analysis
(electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel composite membrane)

IT **9012-76-4D, Chitosan,** Ru(bpy)32+-encapsulated
15158-62-0D, Tris(2,2'-bipyridyl) ruthenium (II), **chitosan** encapsulated with
(electrochemiluminescence of electrodes coated with Ru(bpy)32+-encapsulated **chitosan/silica** gel

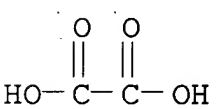
composite membrane)

L32 ANSWER 6 OF 17 HCA COPYRIGHT 2005 ACS on STN
133:331187 Method for extracting high-purity **chitosan** from domestic maggot. Du, Rongqian; Qu, Ronglin; Yu, Mingxi; Li, Desen; Ji, Mingyao; Zhang, Yushu (Tianjin Univ., Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1250057 A **20000412**, 3 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1999-119391 19990915.

AB The process comprises immersing the cleaned domestic maggot in 70-100.degree. water for 3-5, drying, pulverizing with the high-speed pulverizer, filtering or centrifugating to remove protein slurry, washing the maggot skin, treating with < 6% NaOH soln. at 80- 100.degree. for 3-15 h, sepg. to obtain visceral organs and mouthpart, washing to neutrality, adding <0.5% KMnO4 soln., decolorizing at room temp., immersing in 0.3-1% **oxalic acid** soln. for 2-5 h, washing to neutrality with water, decalcifying with 0.5-2 M HCl for 2-15 h, washing the resultant, and drying to obtain the product. The **chitosan** contains N > 6.2-6.9, ignition residue < 0.3%, **heavy metals** (Pb) < 2, and Ca < 200 .mu.g g-1. The removal percentage of the visceral organs is >90%.

IT **144-62-7, Oxalic acid,** uses
(method for extg. high-purity **chitosan** from domestic maggot)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4P, Chitosan**
(method for extg. high-purity **chitosan** from domestic maggot)

RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM C08B037-08
CC 6-4 (General Biochemistry)
Section cross-reference(s): 12
ST **chitosan** maggot extn
IT Maggot
(domestic; method for extg. high-purity **chitosan** from domestic maggot)
IT Extraction
(method for extg. high-purity **chitosan** from domestic

maggot)

IT **144-62-7, Oxalic acid,** uses 1310-73-2, Sodium hydroxide, uses 7647-01-0, Hydrogen chloride, uses 7722-64-7, Potassium permanganate
(method for extg. high-purity **chitosan** from domestic maggot)

IT **9012-76-4P, Chitosan**
(method for extg. high-purity **chitosan** from domestic maggot)

L32 ANSWER 7 OF 17 HCA COPYRIGHT 2005 ACS on STN

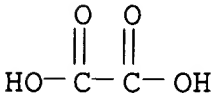
131:323910 Treatment of substrates to enhance the quality of printed images thereon with a mixture of a polyacid and polybase. Nigam, Asutosh (SRI International, USA). PCT Int. Appl. WO 9954143 A1 **19991028**, 36 pp. DESIGNATED STATES: W: CA, JP; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US8868 19990422. PRIORITY: US 1998-82697 19980422; US 1999-282536 19990331; US 1999-282538 19990331; US 1999-282754 19990331.

AB When applied to a substrate, the title compns. provide for high quality printed images when the treated substrate is printed on with an ink contg. a reactive dye having ionizable and/or nucleophilic groups capable of reacting with the image-enhancing agent. Images printed on a substrate treated with the image-enhancing compns. of the invention are bleed-resistant, water-resistant (e.g., water-fast), and/or are characterized by enhanced chroma and hue. Optionally, .ltoreq.40% film-forming binder is added to the image-enhancing compns. A typical compn. contained maleic anhydride-styrene copolymer 21.4, ethoxylated polyethyleneimine (37%) 7.1, and 1:4 fumed **silica**-pptd. **silica** mixt. 71.4 parts.

IT **144-62-7,** Ethanedioic acid, uses **9012-76-4, Chitosan**
(treatment of substrates to enhance the quality of printed images thereon with mixts. of polyacids and polybases)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM B41M001-26
ICS B41M005-00; D21H017-72; D21H019-44; D21H021-16

CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 74

IT **Coating materials**
Ink-jet printing
Sizes (agents)
(treatment of substrates to enhance the quality of printed images thereon with mixts. of polyacids and polybases)

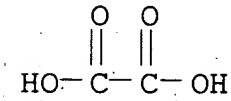
IT 56-84-8, Aspartic acid, uses 56-86-0, Glutamic acid, uses 77-92-9, uses 78-90-0, 1,2-Propane diamine 83-86-3, Phytic acid 87-69-4, uses 88-99-3, Phthalic acid, uses 89-05-4, 1,2,4,5-Benzenetetracarboxylic acid 95-54-5, o-Phenylenediamine, uses 97-65-4, Itaconic acid, uses 99-14-9, Tricarballylic acid 100-21-0, 1,4-Benzenedicarboxylic acid, uses 100-22-1, Tetramethyl-p-phenylenediamine 100-97-0, uses 106-50-3, 1,4-Benzenediamine, uses 107-15-3, 1,2-Ethanediamine, uses 108-45-2, 1,3-Benzenediamine, uses 109-76-2, 1,3-Propanediamine 110-15-6, Butanedioic acid, uses 110-16-7, 2-Butenedioic acid (2Z)-, uses 110-17-8, 2-Butenedioic acid (2E)-, uses 110-18-9 110-94-1, Pentanedioic acid 111-40-0 112-24-3 112-57-2, Tetraethylenepentamine 121-91-5, 1,3-Benzenedicarboxylic acid, uses 124-04-9, Hexanedioic acid, uses 124-09-4, 1,6-Hexanediamine, uses 133-38-0, Dihydroxyfumaric acid 141-82-2, Malonic acid, uses **144-62-7**, Ethanedioic acid, uses 498-21-5, Methylsuccinic acid 498-24-8, Mesaconic acid 517-60-2, 1,2,3,4,5,6-Benzene hexacarboxylic acid 528-44-9, 1,2,4-Benzenetricarboxylic acid 553-26-4, 4,4'-Bipyridine 569-51-7, 1,2,3-Benzene tricarboxylic acid 1076-97-7, 1,4-Cyclohexanedicarboxylic acid 1121-22-8, trans-1,2-Cyclohexanediamine 1436-59-5, cis-1,2-Cyclohexanediamine 1687-30-5, 1,2-Cyclohexanedicarboxylic acid 2479-49-4 2579-20-6, 1,3-Bis(aminomethyl)cyclohexane 3030-47-5, Pentamethyl diethylenetriamine 3083-10-1, 1,1,4,7,10,10-Hexamethyl triethylenetetramine 3102-87-2 3102-89-4, 2,4,5,6-Tetramethyl-m-phenylenediamine 3971-31-1, 1,3-Cyclohexanedicarboxylic acid 4056-78-4, 1,3-Cyclopentanedicarboxylic acid 4067-16-7, Pentaethylenehexamine 4097-89-6, Tris(2-aminoethyl)amine 6915-15-7, Malic acid 9003-47-8, Polyvinylpyridine 9005-32-7, Alginic acid 9011-13-6, Styrene-maleic anhydride copolymer **9012-76-4, Chitosan** 21291-99-6, 1,2,3-Triaminopropane 23084-86-8, 1,2,4-Cyclohexanetricarboxylic acid 25085-20-5, Adipic acid-diethylenetriamine copolymer 25085-34-1 25085-35-2, Acrylic acid-ethyl acrylate copolymer 25104-18-1, Polylysine 25119-83-9, Acrylic acid-butyl acrylate copolymer 25214-24-8, Acrylic acid-propylene copolymer 25214-69-1, Acrylic acid-acrylonitrile copolymer 25265-19-4, Acrylic acid-acrylonitrile-butadiene copolymer 25357-95-3, 1,3,5-Cyclohexane tricarboxylic acid 26125-51-9, Acrylic acid-ethylene-propylene copolymer 30551-89-4, Polyallylamine

50483-99-3, 1,2-Cyclopentanedicarboxylic acid 54590-72-6, Eastek 1100 67130-14-7, Tetramethyl o-phenylenediamine 82370-43-2, Polyimidazole 116770-99-1, Aziridine-ethylene oxide graft copolymer 141805-83-6, 1,2,3-Cyclohexane tricarboxylic acid 177569-38-9, Aziridine-propylene oxide graft copolymer 248277-27-2, Dihydroxyterephthalic acid 248277-28-3, Norbornenetetracarboxylic acid 248277-30-7, Poly(vinylaziridine)
(treatment of substrates to enhance the quality of printed images thereon with mixts. of polyacids and polybases)

L32 ANSWER 8 OF 17 HCA COPYRIGHT 2005 ACS on STN
130:256706 Effects of organic acids on the **adsorption** of **heavy metal** ions by **chitosan** flakes.
Bassi, R.; Prasher, S. O.; Simpson, B. K. (Department of Agricultural and Biosystems Engineering, McGill University, Ste-Anne-de-Bellevue, QC, H9X 3V9, Can.). Journal of Environmental Science and Health, Part A: Toxic/Hazardous Substances & Environmental Engineering, A34(2), 289-294 (English) **1999**. CODEN: JATEF9. ISSN: 1093-4529. Publisher: Marcel Dekker, Inc..

AB The effects of 2 different org. acids, citric and oxalic, on the capacity of **chitosan** flakes to remove Zn2+, Cu2+, Cd2+, and Pb2+ from aq. solns. were studied. A significant redn. in **chitosan's adsorption** capacity for **heavy metals** was obsd. in response to both org. acids, particularly when used at concns. >10-2M. The magnitude of redn. in response to citric acid was slightly greater as compared to **oxalic acid**.

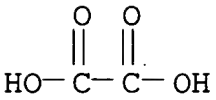
IT **9012-76-4, Chitosan**
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **144-62-7, Oxalic acid**, processes
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



CC **60-3** (Waste Treatment and Disposal)
Section cross-reference(s): **61**
ST org acid **heavy metal chitosan** wastewater; **adsorption heavy metal**

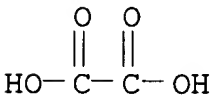
chitosan wastewater
IT Wastewater treatment
(**adsorption**; org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
IT **Heavy metals**
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
IT **9012-76-4, Chitosan**
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
IT 77-92-9, Citric acid, processes **144-62-7, Oxalic acid**, processes
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)
IT 7439-92-1, Lead, processes 7440-43-9, Cadmium, processes 7440-50-8, Copper, processes 7440-66-6, Zinc, processes
(org. acid effects on **adsorption** of **heavy metals** from wastewater by **chitosan** flakes)

L32 ANSWER 9 OF 17 HCA COPYRIGHT 2005 ACS on STN
129:89632 Characteristics of an electrochemiluminescence sensor having a Pt electrode coated with a Ru(bpy)32+-modified **chitosan/silica**-gel membrane. Egashira, N.; Zhao, C.-Z.; Kurauchi, Y.; Ohga, K. (Dep. Applied Chem., Faculty Eng., Oita Univ., Oita, 870-1192, Japan). Kichin, Kitosan Kenkyu, 4(2), 272-273 (Japanese) **1998**. CODEN: KKKEFB. ISSN: 1340-9778. Publisher: Nippon Kichin, Kitosan Gakkai.
AB An electrochemiluminescence sensor having a Pt electrode probe coated doubly with Ru(bpy)32+-modified **chitosan** and **silica** gel membranes was prepd. When the potential was applied, the response to oxalate quickly increased and reached a const. value within .apprx.20 s. A linear calibration curve for oxalate was obtained in the concn. range of 0.1 to 10 mM and the detection limit was 0.02 mM (S/N = 3). The response to oxalate was considerably stronger than those to trimethylamine and proline and the sensor worked stably for over one month. The higher selectivity and stability may be due to an effective action of the **silica** matrix.
IT **144-62-7, Oxalic acid**, analysis
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 9, 11, 72, 73
ST oxalate detn platinum electrode electrochemiluminescence sensor; bipyridyl ruthenium complex electrochemiluminescence sensor oxalate; **chitosan** membrane electrochemiluminescence sensor oxalate detn; **silica** gel membrane electrochemiluminescence sensor oxalate
IT Plant analysis
Urine analysis
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of oxalate in)
IT **Silica** gel, analysis
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)
IT Sensors
(electrochemiluminescence; based on Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)
IT 338-70-5, analysis
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of oxalate)
IT **144-62-7, Oxalic acid**, analysis
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)
IT 7440-06-4, Platinum, analysis **9012-76-4, Chitosan**
203580-82-9, Bis(2,2'-bipyridyl)[4-methyl-4'-(6-bromohexyl)-2,2'-bipyridyl]ruthenium(II)
(electrochemiluminescence sensor having Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica**-gel membrane for detn. of **oxalic acid**)

L32 ANSWER 10 OF 17 HCA COPYRIGHT 2005 ACS on STN
128:303464 Electrochemiluminescence sensor having a Pt electrode coated with a Ru(bpy)32+-modified **chitosan/silica** gel membrane. Zhao, Chang-Zhi; Egashira, Naoyoshi; Kurauchi, Yoshiaki; Ohga, Kazuya (Department of Applied Chemistry, Faculty of Engineering, Oita Univ., Oita, 870-11, Japan). Analytical Sciences, 14(2), 439-441 (English) **1998**. CODEN: ANSCEN. ISSN: 0910-6340. Publisher: Japan Society for Analytical Chemistry.
AB The authors have recently prepd. a Pt electrode coated doubly with Ru(bpy)32+- modified **chitosan** and **silica**-gel layers, which was successfully applied to an ECL optic sensor with improved selectivity toward **oxalic acid**. The authors report on the fundamental behaviors, such as the potential dependence and the decay of the responses.
IT **9012-76-4, Chitosan**
(electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **144-62-7, Oxalic acid,** analysis
(electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane for detn. of)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)

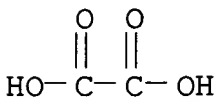


CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 72, 73
ST electrochemiluminescence sensor ruthenium bipyridyl modified electrode; **chitosan** ruthenium bipyridyl membrane electrochemiluminescence sensor; **silica** gel ruthenium bipyridyl electrochemiluminescence sensor; **oxalic acid** detn electrochemiluminescence sensor
IT **Silica** gel, analysis
(electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT Fiber optic sensors
(electrochemiluminescence; electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)

IT Luminescence, chemiluminescence
(electrochemiluminescence; for detn. of **oxalic acid** by electrochemiluminescence using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT Electrodes
(voltammetric; electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT 7440-06-4, Platinum, analysis **9012-76-4, Chitosan**
203580-83-0, Bis(2,2'-bipyridine)[4-methyl-4'-(6-bromohexyl)-2,2'-(bipyridine)]ruthenium(II) perchlorate
(electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT **144-62-7, Oxalic acid,** analysis
(electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane for detn. of)
IT 681-84-5, Tetramethoxysilane
(in prepn. of electrochemiluminescence sensor using Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)

L32 ANSWER 11 OF 17 HCA COPYRIGHT 2005 ACS on STN
128:200314 Substrate selectivity of an electrochemiluminescence Pt electrode coated with a Ru(bpy)32+-modified **chitosan/silica** gel membrane. Zhao, Chang-Zhi; Egashira, Naoyoshi; Kurauchi, Yoshiaki; Ohga, Kazuya (Department of Applied Chemistry, Faculty of Engineering, Oita University, Oita, 870-11, Japan). Analytical Sciences, 13(Suppl., Asianalysis IV), 333-336 (English) **1997**. CODEN: ANSCEN. ISSN: 0910-6340. Publisher: Japan Society for Analytical Chemistry.
AB The substrate selectivity of the known Ru(bpy)32+ electrochemiluminescence (ECL) is changed by coating a Pt working electrode with a Ru(bpy)32+-modified **chitosan** membrane and successively with a **silica** gel membrane that was prepd. by the sol-gel method using tetramethoxysilane as a precursor. The double coating resulted in a high selectivity toward **oxalic acid** at pH 6.8, lowering relative ECL responses to trimethylamine, proline and 4-hydroxyproline .apprx.2.8, 3.4 and 3.8 times, resp., compared to those obtained with a Pt electrode coated singly with the modified **chitosan.**
IT **144-62-7, Oxalic acid,** properties
(electrochemiluminescence on Pt electrode and Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



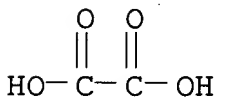
IT **9012-76-4D, Chitosan,** reaction product with tris(bipyridine)ruthenium(II) deriv.
(substrate selectivity of electrochemiluminescence Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
CC 80-6 (Organic Analytical Chemistry)
Section cross-reference(s): 72, 73
ST substrate selectivity electrochemiluminescence coated platinum electrode; ruthenium bipyridine **chitosan** coated platinum electrochemiluminescence; **silica** gel membrane platinum electrode electrochemiluminescence
IT Luminescence, chemiluminescence
(electrochemiluminescence; substrate selectivity of electrochemiluminescence Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT Electrodes
(substrate selectivity of electrochemiluminescence Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT **Silica** gel, analysis
(substrate selectivity of electrochemiluminescence Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT 51-35-4, 4-Hydroxyproline 75-50-3, Trimethylamine, properties 98-79-3, 5-Oxoproline 141-82-2, Malonic acid, properties **144-62-7, Oxalic acid,** properties 302-72-7, Alanine 516-06-3, Valine 609-36-9, Proline 617-65-2, Glutamic acid 2835-06-5
(electrochemiluminescence on Pt electrode and Pt electrode coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)
IT 7440-06-4, Platinum, analysis **9012-76-4D, Chitosan**, reaction product with tris(bipyridine)ruthenium(II) deriv. 203580-83-0D, Bis(2,2'-bipyridine)[4-methyl-4'-(6-bromohexyl)-2,2'-bipyridine]ruthenium(II) perchlorate, reaction product with **chitosan**
(substrate selectivity of electrochemiluminescence Pt electrode

coated with Ru(bpy)32+-modified **chitosan/silica** gel membrane)

L32 ANSWER 12 OF 17 HCA COPYRIGHT 2005 ACS on STN
128:110687 Investigation with **chitosan**-oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme. Ramakrishnan, V.; Lathika, K. M.; D'Souza, S. J.; Singh, B. B.; Raghavan, K. G. (Radiation Biology and Biochemistry Division, Bhabha Atomic Research Centre, Mumbai, 400 085, India). Indian Journal of Biochemistry & Biophysics, 34(4), 373-378 (English) **1997**. CODEN: IJBBBQ. ISSN: 0301-1208. Publisher: National Institute of Science Communication, CSIR.

AB Enteric hyperoxaluria manifests due to hyperabsorption of dietary oxalate, secondary to a variety of chronic gastrointestinal disorders. The potential use of a **chitosan**-immobilized oxalate oxidase-catalase conjugate to deplete the oxalate content of food materials while they are in the digestive tract has been evaluated by treating rat stomach chyme with such an enzyme prepn. Oxalate oxidase, obtained from beet stem, was **adsorbed** on **chitosan** along with catalase and then cross linked with glutaraldehyde to stabilize the deriv. This chem. modification of oxalate oxidase brought about a shift in its optimal pH from 4.2 to 3.8 with a marginal increase in its Km. Compared to native enzyme, the modified oxalate oxidase exhibited increased storage stability, higher thermal stability, and enhanced resistance to proteolytic digestion and **heavy metal** inactivation. These improved properties of the immobilized oxalate oxidase possibly render it suitable for oral administration under hyperoxaluric conditions.

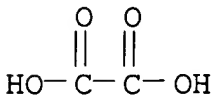
IT **144-62-7**, Ethanedioic acid, biological studies
(hyperoxaluria; enteric, possible treatment of; use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



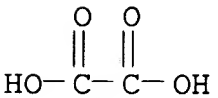
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme
IT **9012-76-4, Chitosan**
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
CC 1-9 (Pharmacology)
Section cross-reference(s): 7
ST hyperoxaluria chyme food oxalate degrdn; oxalate oxidase catalase immobilization **chitosan** hyperoxaluria
IT Digestive tract content
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
IT **144-62-7**, Ethanedioic acid, biological studies
(hyperoxaluria; enteric, possible treatment of; use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
IT 9001-05-2D, Catalase, **chitosan**-immobilized and glutaraldehyde-crosslinked 9031-79-2D, Oxalate oxidase, **chitosan**-immobilized and glutaraldehyde-crosslinked
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
IT **144-62-7**, Ethanedioic acid, biological studies
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)
IT **9012-76-4**, **Chitosan**
(use of **chitosan**-immobilized oxalate oxidase-catalase conjugate for degrading oxalate from hyperoxaluric rat chyme)

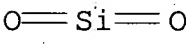
L32 ANSWER 13 OF 17 HCA COPYRIGHT 2005 ACS on STN
123:237910 Cross-linked polysaccharides used as **absorbant** materials. Cottrell, Ian William; Chowdhary, Manjit Singh; Goswami, Animesh (Rhone-Poulenc Specialty Chemicals Co., USA). Eur. Pat. Appl. EP 668078 A2 **19950823**, 18 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT, LI, NL, SE. (French). CODEN: EPXXDW. APPLICATION: EP 1995-400287 19950213. PRIORITY: US 1994-196357 19940215; US 1994-274591 19940713.
AB **Absorbant** materials comprise cross-linked polysaccharides. Thus, 20 g guar carboxymethyl was dissolved in 2 L of 45-50.degree. water, then 2.25 mL of a soln. of zirconium sodium lactate was added thereto and the mixt. was then dried. The **absorption** capacity of the powder was 48.5 g/g.
IT **144-62-7**, Ethanedioic acid, uses **144-62-7D**, Ethanedioic acid, salts **1344-28-1**, **Alumina**, uses
(cross-linked polysaccharides used as **absorbant** materials)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 1344-28-1 HCA
CN Aluminum oxide (Al2O3) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **7631-86-9, Silica,** biological studies
9012-76-4, Chitosan
(cross-linked polysaccharides used as **absorbant** materials)
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61L015-28
ICS A61L015-60
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 33
ST crosslinked polysaccharide **absorbant** material; guar carboxymethyl crosslinked **absorbant** material; zirconium sodium lactate crosslinked **absorbant** material
IT Diatomeae
(cross-linked polysaccharides used as **absorbant** materials)
IT Acrylic polymers, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Amino acids, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Anhydrides
(cross-linked polysaccharides used as **absorbant** materials)
IT Carbohydrates and Sugars, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Carboxylic acids, biological studies

(cross-linked polysaccharides used as **absorbant** materials)
IT Gelatins, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Paper
(cross-linked polysaccharides used as **absorbant** materials)
IT Peptides, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Polyamides, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Polyesters, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Polyoxymethylenes, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Polysaccharides, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Proteins, biological studies
(cross-linked polysaccharides used as **absorbant** materials)
IT Sphagnum
(cross-linked polysaccharides used as **absorbant** materials)
IT Surfactants
(cross-linked polysaccharides used as **absorbant** materials)
IT Medical goods
(**absorbents**, cross-linked polysaccharides used as **absorbant** materials)
IT Alcohols, biological studies
(carboxy, cross-linked polysaccharides used as **absorbant** materials)
IT Fibers
(cellulosic, cross-linked polysaccharides used as **absorbant** materials)
IT Polysaccharides, biological studies
(galactomannan-contg., cross-linked polysaccharides used as **absorbant** materials)
IT Carboxylic acids, biological studies
(hydroxy, cross-linked polysaccharides used as **absorbant** materials)
IT Polyesters, biological studies

(lactide, cross-linked polysaccharides used as **absorbant** materials)

IT Protein hydrolyzates
(soya, cross-linked polysaccharides used as **absorbant** materials)

IT 50-21-5, Lactic acid, uses 50-21-5D, Lactic acid, salts 56-81-5, 1,2,3-Propanetriol, uses 56-84-8, Aspartic acid, uses 56-84-8D, Aspartic acid, salts 56-86-0D, Glutamic acid, salts 57-55-6, 1,2-Propanediol, uses 64-17-5, Ethanol, uses 64-18-6, Formic acid, uses 64-18-6D, Formic acid, salts 64-19-7, Acetic acid, uses 64-19-7D, Acetic acid, salts 65-85-0, Benzoic acid, uses 65-85-0D, Benzoic acid, salts 67-56-1, Methanol, uses 77-92-9, uses 77-92-9D, salts 79-14-1, uses 79-14-1D, salts 87-69-4, uses 87-69-4D, salts 88-99-3, 1,2-Benzenedicarboxylic acid, uses 88-99-3D, 1,2-Benzenedicarboxylic acid, salts 107-21-1, 1,2-Ethanediol, uses 110-15-6, Butanedioic acid, uses 110-15-6D, Butanedioic acid, salts 110-16-7, 2-Butenedioic acid (Z)-, uses 110-16-7D, 2-Butenedioic acid (Z)-, salts 110-17-8, 2-Butenedioic acid (E)-, uses 110-17-8D, 2-Butenedioic acid (E)-, salts 121-44-8, uses 121-44-8D, salts **144-62-7**, Ethanedioic acid, uses **144-62-7D**, Ethanedioic acid, salts 476-73-3, Benzene1,2,3,4-tetracarboxylic acid 476-73-3D, Benzene1,2,3,4-tetracarboxylic acid, salts **1344-28-1**, **Alumina**, uses 24991-23-9 24991-23-9D, salts 25513-46-6, Polyglutamic acid 25513-46-6D, Polyglutamic acid, salts 25608-40-6, Polyaspartic acid 26063-13-8, Polyaspartic acid 62632-70-6
(cross-linked polysaccharides used as **absorbant** materials)

IT 4229-34-9, Zirconium acetate 9000-30-0, Guar 12125-02-9, Ammonium chloride, reactions 15529-67-6, Sodiumzirconiumlactate 22829-17-0, Zirconium ammonium carbonate 39454-79-0, Carboxymethyl hydroxypropyl guar 51198-15-3, Carboxymethyl guar 60676-90-6, Zirconium lactate 65497-29-2 72517-32-9 109768-37-8, Tyzor 131
(cross-linked polysaccharides used as **absorbant** materials)

IT 50-70-4, D-Glucitol, biological studies 50-99-7, Glucose, biological studies 57-48-7, Fructose, biological studies 57-50-1, Saccharose, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 63-42-3, Lactose 69-65-8, D-Mannitol 69-79-4, Maltose 79-10-7D, 2-Propenoic acid, polymers with starch, graft 87-79-6, **Sorbose** 87-99-0, Xylitol 90-80-2, Gluconolactone 526-95-4, Gluconic Acid 526-95-4D, Gluconic Acid, salts 1398-61-4, Chitin 3458-28-4, Mannose 6556-12-3, Glucuronic acid 6556-12-3D, Glucuronic acid, salts **7631-86-9**, **Silica**, biological studies 9000-01-5, Arabic gum 9000-07-1, Carragheenan 9000-36-6, Karaya gum 9000-69-5, Pectin

9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-01-4D, Polyacrylic acid, salts 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-39-8, Pvp 9003-53-6, Polystyrene 9004-34-6, Cellulose, biological studies 9004-35-7, Cellulose acetate 9005-25-8, Starch, biological studies 9005-32-7D, Alginic acid, compds. **9012-76-4, Chitosan** 11138-66-2, Xanthan gum 13718-94-0, Isomaltulose 25322-68-3 25322-69-4 26063-00-3, Polyhydroxybutyrate 26744-04-7 68424-04-4, Polydextrose 83120-66-5
(cross-linked polysaccharides used as **absorbant** materials)

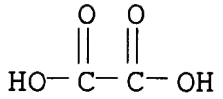
L32 ANSWER 14 OF 17 HCA COPYRIGHT 2005 ACS on STN
123:152991 Biodegradable periodontal implant precursor. Polson, Alan M.; Swanbom, Deryl D.; Dunn, Richard L.; Cox, Charles P.; Norton, Richard L.; Lowe, Bryan K.; Peterson, Kenneth S. (Atrix Laboratories, Inc., USA). Can. Pat. Appl. CA 2117394 AA **19950329**, 56 pp. (English). CODEN: CPXXEB. APPLICATION: CA 1994-2117394 19940707. PRIORITY: US 1993-127642 19930928.

AB A biodegradable implant precursor has a 2-part structure made of an outer sac and a liq. content. The implant precursor is composed of a biodegradable, water-coagulable thermoplastic polymer and a water-miscible org. solvent. When administered to an implant site in an animal, the implant precursor will solidify in situ to a solid, microporous matrix by dissipation of the org. solvent to surrounding tissue fluids and coagulation of the polymer. Methods of making the implant precursor, an app. for forming the precursor, and a kit contg. the app. are described. Also provided are methods of using the implant precursor for treating a tissue defect in an animal, e.g. for enhancing cell growth and tissue regeneration, wound and organ repair, nerve regeneration, and soft and hard tissue regeneration, for delivery of biol. active substances to tissue or organs, etc. Thus, a mixt. of poly(DL-lactide) (mol. wt. 65,000) 37 and N-methyl-2-pyrrolidone 63% was sterilized with .gamma.-radiation, confined between 2 saline-satd. porous polyethylene substrates for 6 min, and removed. The resulting implant precursor comprised an opaque, semirigid, flexible, 2-part structure with a gelatinous, semirigid outer layer and a more liq. core.

IT **144-62-7D, Oxalic acid**, esters with polyoxyalkylenes **9012-76-4, Chitosan**
(biodegradable periodontal implant precursor)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



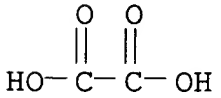
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61L027-00
ICS A61F002-00; A61C013-08
CC 63-7 (Pharmaceuticals)
IT **Ceramic** materials and wares
(support substrates; biodegradable periodontal implant precursor)
IT 110-15-6D, Succinic acid, esters with polyoxyalkylenes
144-62-7D, Oxalic acid, esters with
polyoxyalkylenes 463-84-3D, Orthocarbonic acid, esters, polymers
1398-61-4, Chitin 9003-09-2, Poly(methyl vinyl ether)
9012-76-4, Chitosan 24980-41-4, Polycaprolactone
25248-42-4, Polycaprolactone 26009-03-0, Polyglycolide
26023-30-3 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)]
26202-08-4, Polyglycolide 26680-10-4, Polylactide 31621-87-1,
Polydioxanone 52352-27-9, Poly(hydroxybutyric acid) 78644-42-5,
Poly(malic acid) 102190-94-3
(biodegradable periodontal implant precursor)
IT 50-70-4, **Sorbitol**, biological studies 56-81-5, Glycerin,
biological studies 57-88-5, Cholesterol, biological studies
77-89-4, Acetyl triethyl citrate 77-90-7, Acetyl tributyl citrate
77-93-0, Triethyl citrate 84-66-2, Diethyl phthalate 84-74-2,
Dibutyl phthalate 102-76-1, Glycerol triacetate 106-30-9, Ethyl
heptanoate 106-65-0, Dimethyl succinate 109-43-3, Dibutyl
sebacate 110-80-5, 2-Ethoxyethanol 111-15-9, 2-Ethoxyethyl
acetate 131-11-3, Dimethyl phthalate 553-90-2, Dimethyl oxalate
627-93-0, Dimethyl adipate 25322-68-3, PEG 25495-97-0, Dimethyl
citrate 26762-52-7, Hexanediol
(drug release rate modifier; biodegradable periodontal implant
precursor)

L32 ANSWER 15 OF 17 HCA COPYRIGHT 2005 ACS on STN
120:291984 Studies on the effect of fruit-coating polymers and organic acids on growth of Colletotrichum musae in vitro and on post-harvest control of anthracnose of bananas. Al Zaemey, A. B.; Magan, N.; Thompson, A. K. (Silsoe Coll., Cranfield Inst. Technol., Silsoe, MK45 5DT, UK). Mycological Research, 97(12), 1463-8 (English) **1993**. CODEN: MYCRER. ISSN: 0953-7562.
AB Twelve coating materials and their components which can be applied to fruit, and 8 org. acids were incorporated into agar media to det. their ability to inhibit mycelial growth of C. musae. Of the

coating materials tested, 2 formulations based on a mixt. of sucrose esters + fatty acids, Semperfresh F (SFS) and Semperfresh acid-stable (SFAS) at 0.cntdot.1-1% concns. were most effective at inhibiting mycelial growth of C. musae. The components used in fruit-coating materials which significantly inhibited growth were oleic, palmitic and lauric acids. Coating materials like **chitosan**, CM-cellulose and carboxymethyl **chitosan** were ineffective at concns. up to 1%. The effect of org. acids and their salts on the growth of C. musae varied with concn. (1-3%). Malic, citric, oxalic and maleic acids all significantly reduced growth of C. musae. Complete inhibition of growth was achieved with potassium **sorbate** and sodium benzoate at 0.125% and oxalic and maleic acids at 0.5% (wt./vol.). Org. acids also increased the lag time prior to growth initiation. Coating materials, alone or in combination with org. acids or a fungicide (benomyl), were compared for their ability to inhibit post-harvest lesion expansion of anthracnose symptoms on banana fruits at 25 .degree.C and 85-90% r.h. SFAS at 1.5 or 3%, and SFAS + 2% potassium **sorbate** were the most effective treatments when intact skin of banana fruits was inoculated with spores of C. musae prior to application. When fruits were wound-inoculated with mycelium of C. musae, combinations of 3% SFAS with benomyl (250 or 500 .mu.g/L) controlled lesion expansion more effectively than the fungicide alone. SFAS alone, or with potassium **sorbate**, or sodium benzoate significantly delayed lesion expansion for up to 7 d, but after 11 d incubation differences between treatments and the untreated control were less marked.

IT **144-62-7, Oxalic acid**, biological studies **9012-76-4, Chitosan**
(growth of Colletotrichum musae and control of anthracnose on bananas response to)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
CC 5-2 (Agrochemical Bioregulators)
IT **Coating materials**
(fungicidal, growth of Colletotrichum musae and control of anthracnose on bananas response to)
IT 50-81-7, Ascorbic acid, biological studies 57-10-3, Palmitic acid, biological studies 65-85-0, Benzoic acid, biological studies

77-92-9, Citric acid, biological studies 79-09-4, Propionic acid, biological studies 110-16-7, Maleic acid, biological studies 110-44-1, **Sorbic** acid 112-80-1, Oleic acid, biological studies 127-09-3, Sodium acetate 137-40-6, Sodium propionate 143-07-7, Lauric acid, biological studies **144-62-7, Oxalic acid**, biological studies 532-32-1, Sodium benzoate 6915-15-7, Malic acid 9000-01-5, Gum arabic 9000-30-0, Guar gum 9004-32-4, CM-cellulose 9005-38-3, Sodium alginate **9012-76-4, Chitosan** 10043-67-1, Aluminum potassium sulfate (AlK(SO4)2) 24634-61-5, Potassium **sorbate** 83512-85-0, Carboxymethyl **chitosan** 155123-92-5, Semperfresh acid-stable 155123-93-6, Semperfresh F
(growth of Colletotrichum musae and control of anthracnose on bananas response to)

L32 ANSWER 16 OF 17 HCA COPYRIGHT 2005 ACS on STN
106:51642 Coating of fabrics with liquid crystals. Kishimoto, Masami (Fujii Keori Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61215777 A2 **19860925** Showa, 5 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1985-55504 19850318.

AB Decorative fabrics with improved temp. sensitivity of liq. crystal coatings are prepd. by coating fabrics with aq. mixts. contg. proteins and liq. crystals and optionally contg. water-sol. resins and drying the fabrics. Thus, a drapery was coated with a liq. contg. a water-sol. acrylic polymer 100, graphite 5, liq. polybutadiene 15, and ammonia water 2 parts, dried, and coated with a liq. contg. cholesteryl oleate 1.7, cholesteryl chloride 0.68, Plas-coat Z 3308 (water-sol. polyester) 4, and a mixt. of **chitosan** 3, 80% formic acid 2.5, and H2O 100 parts, and dried. The fabric was then coated with a mixt. of **chitosan** 3, 80% formic acid 2.5, and H2O 100 parts, and dried. The fabric was then coated with a mixt. of a methoxymethylated nylon particles 20, MeOH 100, and **oxalic acid** 0.6 parts, dried, coated with a liq. contg. Sanprene, and dried to give a coated decorative fabric with good fastness to washing and dry-cleaning solvents. The color of this fabric changed from yellow to dark green, yellow green, green, yellow green, and dark green at 6-26.degree., and the color changed from orange to red at 27-38.degree..

IT **9012-76-4**
(liq. crystal coatings contg., on fabrics, for improved temp. sensitive)

RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM D06M015-00
ICS D06M013-00
CC 40-5 (Textiles and Fibers)

ST liq crystal coated fabric decorative; color variation coated fabric; drapery liq crystal coated fabric; cholesteryl oleate coated fabric decorative; **chitosan** additive liq crystal coating; protein additive liq crystal coating; temp sensitivity liq crystal coating

IT **Coating materials**
(temp.-sensitive, liq. crystal, on fabrics, for color variation for draperies)

IT **9012-76-4**
(liq. crystal coatings contg., on fabrics, for improved temp. sensitive)

L32 ANSWER 17 OF 17 HCA COPYRIGHT 2005 ACS on STN
74:15666 Treating an aqueous medium with **chitosan** and derivatives of chitin to remove an impurity. Peniston, Quintin P.; Johnson, Edwin Lee U.S. US 3533940 **19701013**, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1967-643077 19670602.

AB Chitin, the org. skeletal material in crustacean shells, a linear aminopolysaccharide having 1000-3000 basic units, is recovered from King crabs of Alaska by leaching out CaCO3 with cold N HCl, removing the protein with 3% NaOH at 100.degree. for 2 hr, rinsing, cleaning with KMnO4 and eliminating excess **oxalic acid**.
To solubilize in 10% HOAc, this chitin is partially deacetylated by 40% NaOH to 150.degree. to form **chitosan**.
Chitosan reduces color from tannins and polyphenols in oak leaf infusions. From gravel wash water it coagulates turbidity better than alum, and faster than with alum and Separan. Supernatants from softening of calcium hard water are settled with **chitosan** better than with Separan, however both agents gave equal results with magnesium hard waters. **Chitosan** plus alum and NaHCO3 reduced color from a naturally colored water; alum and Separan were only slightly effective. **Chitosan** and Separan gave similar results in settling suspensions of montmorillonite and of kaolin.

IT **9012-76-4**
(water treatment by)

RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC B01D
NCL 210052000
CC **61** (Water)
ST chitin derivs water treatment; color water chitin derivs; montmorillonite suspensions settling **chitosan**; kaolin suspensions settling **chitosan**

IT 1398-61-4D, Chitin, derivs. **9012-76-4**
(water treatment by)

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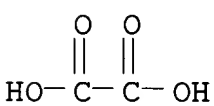
L33 ANSWER 1 OF 15 HCA COPYRIGHT 2005 ACS on STN
142:183338 Soft gel composed with **chitosan** and gelatin. Kim, Min Jo; Kim, Won Gi; Park, Bong Guk; Son, Tae Won (S. Korea). Repub. Korean Kongkae Taeho Kongbo KR 2001016482 A 20010305, No pp. given (Korean). CODEN: KRXXA7. APPLICATION: KR 2000-76267 20001214.

AB A soft gel composed with **chitosan**, gelatin and water as main ingredients is provided, which has adequate adhesiveness to remove easily, shows water-soly., bioaffinity, biodegradability, antibiosis, and can **absorb** exudate from wound, so can be used with medicines to protect human wound and to help treatment of the wound. The soft gel is manufd. by the following four steps: (1) adding gelatin originated from meats to water at 60 to form gelatin soln., adding 0.1-5% of org. acid (such as acetic acid, lactic acid, formic acid, glycolic acid, acrylic acid, propionic acid, succinic **acid**, **oxalic acid**, ascorbic acid, gluconic acid, tartaric acid, maleic acid, citric acid, glutamic acid), adding 1-30% of **chitosan** and shaking for an hour to obtain a fluid soln. contg. **chitosan** and gelatin as main ingredients; (2) quenching the fluid soln. to 20 to get solidified gel which can be molded easily; (3) forming the solidified gel at 60 into a film using a film-molder and quenching under 20 to produce a soft film; (4) drying the solidified gel film at 30 for 12h to get water-sol. solid film.

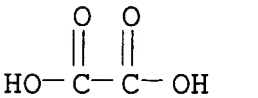
IT **144-62-7**, **Oxalic acid**, biological studies **9012-76-4**, **Chitosan**
(soft gel composed with **chitosan** and gelatin)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61K009-00
CC 63-6 (Pharmaceuticals)
ST soft gel **chitosan** gelatin wound healing
IT Drug delivery systems
(gels; soft gel composed with **chitosan** and gelatin)
IT Human
Wound healing
(soft gel composed with **chitosan** and gelatin)

IT Gelatins, biological studies
(soft gel composed with **chitosan** and gelatin)
IT 50-21-5, Lactic acid, biological studies 50-81-7, Ascorbic acid, biological studies 56-86-0, Glutamic acid, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 77-92-9, Citric acid, biological studies 79-09-4, Propionic acid, biological studies 79-10-7, Acrylic acid, biological studies 79-14-1, Glycolic acid, biological studies 87-69-4, Tartaric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies **144-62-7, Oxalic acid**, biological studies 526-95-4, D-Gluconic acid **9012-76-4, Chitosan**
(soft gel composed with **chitosan** and gelatin)

L33 ANSWER 2 OF 15 HCA COPYRIGHT 2005 ACS on STN
139:122827 **Absorbent** structure comprising synergistic components for superabsorbent polymer. Sun, Tong; Dutkiewicz, Jacek; Qin, Jian; Zhang, Xiaomin; Lonsky, Werner; Li, Yong (USA). U.S. Pat. Appl. Publ. US 2003139714 A1 20030724, 12 pp., Cont.-in-part of U.S. Ser. No. 473,166, abandoned. (English). CODEN: USXXCO. APPLICATION: US 2002-279769 20021024. PRIORITY: US 1999-473166 19991228.
AB **Absorbent** structures that form superabsorbent polymers in situ are disclosed. The structures include an **absorbent** material and a fibrous material contg. an activating agent. The fibrous material releases the activating agent upon stimulation with an activator, which causes the polymer to become a superabsorbent polymer. The **absorbent** component is desirably a water-swellable, water-insol. polymer. The **absorbent** structures form a superabsorbent compn. in situ. Methods of making the activating agent contg. fibrous material are provided. An **absorbent** comprising polyacrylic acid, sodium carbonate-treated pulp was prepd. having a gel capacity of 45 g/g.
IT **144-62-7, Oxalic acid**, uses
(**absorbent** structure comprising synergistic components for superabsorbent polymer)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IC ICM A61F013-15
ICS A61F013-20
NCL 604368000; 604367000

CC 63-7 (Pharmaceuticals)
ST **absorbent** polymer polyacrylate sodium carbonate pulp
IT **Absorbents**
Cellulose pulp
Superabsorbents
Wood
(**absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Polyamines
Polymers, biological studies
(**absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Amides, uses
Hydroxides (inorganic)
Imines
Oxides (inorganic), uses
Polyamides, uses
Salts, uses
(**absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Amines, uses
(aliph.; **absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Amines, uses
(arom.; **absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Acids, uses
(inorg.; **absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Imines
(polyimines; **absorbent** structure comprising synergistic components for superabsorbent polymer)
IT Pinus
(pulp; **absorbent** structure comprising synergistic components for superabsorbent polymer)
IT 9003-01-4P, Polyacrylic acid
(**absorbent** structure comprising synergistic components for superabsorbent polymer)
IT 1398-61-4, Chitin 9000-07-1, Carrageenan 9002-89-5 9002-98-6 9003-05-8 9003-19-4, Polyvinylether 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose 9004-34-6D, Cellulose, acrylic-grafted 9004-64-2, Hydroxypropyl cellulose 9005-25-8D, Starch, acrylic-grafted 9005-32-7, Alginic acid 9005-38-3, Algin 9006-26-2, Ethylene maleic anhydride copolymer 9057-06-1, Carboxymethyl starch 24937-47-1, Polyarginine 24991-23-9 25104-18-1, Polylysine 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 26063-13-8, Polyaspartic acid 26700-71-0, Polyglutamine 26894-34-8,

Polyasparagine 26913-06-4, Poly[imino(1,2-ethanediyl)] 28088-48-4, Polyasparagine 31851-82-8 37522-67-1, Polydiallyl dimethyl ammonium hydroxide 38000-06-5, Polylysine 66267-50-3, **Chitosans** 69864-43-3, Polyglutamine
(**absorbent** structure comprising synergistic components for superabsorbent polymer)

IT 56-84-8, Aspartic acid, uses 56-86-0, Glutamic acid, uses 77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses 141-82-2, Malonic acid, uses 144-55-8, Sodium bicarbonate, uses **144-62-7, Oxalic acid**, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 1518-54-3, Isosaccharinic acid 6556-12-3, Glucuronic acid 7664-41-7, Ammonia, uses 25608-40-6, Polyaspartic acid
(**absorbent** structure comprising synergistic components for superabsorbent polymer)

IT 497-19-8, Sodium carbonate, biological studies
(**absorbent** structure comprising synergistic components for superabsorbent polymer)

L33 ANSWER 3 OF 15 HCA COPYRIGHT 2005 ACS on STN

137:83698 Method for preparing hydrophilic porous polymeric materials for use in biotechnology and pharmaceuticals. Lai, Huey-min; Chang, Chun-hui; Liao, Chun-jen; Chen, Chin-fu; Wu, Kuei-hung; Chang, Yuan-chia; Jan, Yu-yen; Mou, Tsung-yi (Industrial Technology Research Institute, Taiwan). U.S. Pat. Appl. Publ. US 2002086977 A1 20020704, 11 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-83242 20011019. PRIORITY: TW 2000-89127372 20001220.

AB The present invention discloses a method for prepg. a hydrophilic porous polymeric material comprising the step of mixing a hydrophilic polymeric material with a hydrophobic material; solvent sintering the surface of the hydrophilic polymeric material with water or an aq. soln.; and removing the hydrophobic material contained within the hydrophilic polymeric material with a massive org. solvent. Thus, the hydrophilic porous polymeric material with high porosity and stable structure is rapidly mass produced.

IT **9012-76-4, Chitosan**
(method for prepg. hydrophilic porous polymeric materials for use in biotechnol. and pharmaceuticals)

RN 9012-76-4 HCA

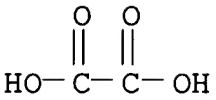
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **144-62-7, Oxalic acid**, uses
(method for prepg. hydrophilic porous polymeric materials for use in biotechnol. and pharmaceuticals)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



IC ICM A61K035-14
ICS C07K016-00; C09H001-00; A61K038-17; C07K017-00; C07K014-00; C07K001-00; A61K038-00; A61K038-16
NCL 530350000
CC 63-7 (Pharmaceuticals)
IT 1398-61-4, Chitin 9000-07-1, Carrageenin 9000-69-5, Pectin 9005-32-7, Alginic acid 9007-28-7, Chondroitin sulphate **9012-76-4, Chitosan**
(method for prepg. hydrophilic porous polymeric materials for use in biotechnol. and pharmaceuticals)
IT 50-21-5, Lactic acid, uses 60-29-7, Ether, uses 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses 64-19-7D, Acetic acid, polyacrylic cellulose, uses 65-85-0, Benzoic acid, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 67-66-3, Chloroform, uses 68-04-2, Sodium citrate 71-43-2, Benzene, uses 75-05-8, Acetonitrile, uses 77-92-9, Citric acid, uses 78-93-3, Butanone, uses 87-69-4, Tartaric acid, uses 108-30-5, Succinic anhydride, uses 108-88-3, Toluene, uses 108-94-1, Cyclohexanone, uses 109-99-9, Tetrahydrofuran, uses 110-44-1, **Sorbic** acid 110-54-3, n-Hexane, uses 111-30-8, Glutaraldehyde 124-18-5, Decane 127-09-3, Sodium acetate 141-78-6, Ethyl acetate, uses 144-55-8, Sodium bicarbonate, uses **144-62-7, Oxalic acid**, uses 151-51-9, Carbodiimide 661-20-1, Isocyanate 1305-62-0, Calcium hydroxide, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 7647-01-0, Hydrochloric acid, uses 7664-38-2, Phosphoric acid, uses 7664-41-7, Ammonia, uses 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric acid, uses 7704-34-9D, Sulfur, isocyanate 7782-77-6, Nitrous acid 7782-99-2, Sulfurous acid, uses 9002-86-2, Polyvinyl chloride 9003-07-0, Polypropylene 9003-53-6, Polystyrene 10043-35-3, Boric acid, uses 16971-29-2, Borohydride 24981-14-4, Polyvinyl fluoride 25038-59-9, Polyethylene terephthalate, uses 25322-68-3, Polyethylene glycol 62624-30-0, Ascorbic acid
(method for prepg. hydrophilic porous polymeric materials for use in biotechnol. and pharmaceuticals)

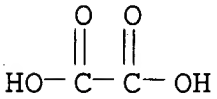
L33 ANSWER 4 OF 15 HCA COPYRIGHT 2005 ACS on STN
135:82057 Cellulosic fibrous materials containing an activating agent for superabsorbent polymers. Sun, Tong; Lonsky, Werner; Li, Yong; Qin, Jian; Zhang, Xiaomin; Dutkiewicz, Jackek (Kimberly-Clark Worldwide, Inc., USA). PCT Int. Appl. WO 2001047570 A1 20010705, 33

pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US34541 20001219. PRIORITY: US 1999-473183 19991228.

AB **Absorbent** structures that form superabsorbent polymers in situ, useful for disposable **absorbent** products for body fluids, are described. The structures include an **absorbent** material and a cellulosic fibrous material contg. an activating agent. The activating agent (5-80% of the fibrous material) is selected from the group consisting of sodium carbonate, sodium bicarbonate, polyamines, polyimines, polyamides, polyquaternary ammoniums, chitins, **chitosans**, polyasparagines, polylysines, polyarginines, aliph. amines, arom. amines, imines, amides, metallic oxides, hydroxides, salts, ammonia, sodium hydroxide, potassium hydroxide, polyacrylic acid, polymaleic acid, CM-cellulose, alginic acid, polyaspartic acid, polyglutamic acid, citric acid, glutamic acid, aspartic acid, inorg. acid, salts, isosaccharinic acid, tartaric **acid**, **oxalic acid**, malonic acid, glucuronic acid, and their mixts. and copolymers. The fibrous material releases the activating agent upon stimulation with an activator, which causes the polymer to become a superabsorbent polymer. The **absorbent** component is desirably a water-swellable, water-insol. polymer, such as polyacrylic acid. Methods of making the activating agent contg. fibrous material are provided.

IT **144-62-7**, **Oxalic acid**, biological studies **9012-76-4**, **Chitosan**
(cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61L015-60

ICS D21C009-00; A61L015-18; A61L015-28
CC 63-7 (Pharmaceuticals)
IT Medical goods
(**absorbents**; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Amines, biological studies
(aliph.; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Amines, biological studies
(arom.; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Cellulose pulp
(cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Acids, biological studies
Amides, biological studies
Bases, biological studies
Hydroxides (inorganic)
Imines
Oxides (inorganic), biological studies
Polyamides, biological studies
Polyamines
Salts, biological studies
(cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Fibers
(cellulosic; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Acids, biological studies
(inorg.; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT **Absorbents**
(medical; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Imines
(polyimines; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Superabsorbents
(polymers; cellulosic fibrous materials contg. activating agent

for superabsorbent polymers for disposable **absorbent** products)

IT Quaternary ammonium compounds, biological studies
(polymers; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT Polymers, biological studies
(superabsorbents; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT Polyesters, biological studies
(unsatd.; cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 141-82-2, Malonic acid, biological studies 144-55-8, Sodium bicarbonate, biological studies **144-62-7, Oxalic acid,**
biological studies 497-19-8, Sodium carbonate, biological studies 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1398-61-4, Chitin 1518-54-3, Isosaccharinic acid 7664-41-7, Ammonia, biological studies 9003-01-4, Polyacrylic acid 9004-32-4, Carboxymethyl cellulose sodium 9004-34-6, Cellulose, biological studies 9005-32-7, Alginic acid **9012-76-4, Chitosan**
24937-47-1, Polyarginine 24991-23-9 25104-18-1, Polylysine 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 26063-13-8, Polyaspartic acid 26099-09-2, Polymaleic acid 26894-34-8, Polyasparagine 28088-48-4, Polyasparagine 38000-06-5, Polylysine 70332-45-5, L-Glucuronic acid
(cellulosic fibrous materials contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

L33 ANSWER 5 OF 15 HCA COPYRIGHT 2005 ACS on STN
135:82056 Superabsorbent polymers for disposable **absorbent** products. Dutkiewicz, Jacek; Sun, Tong; Lonsky, Werner; Li, Yong; Qin, Jian; Zhang, Xiaomin (Kimberly-Clark Worldwide, Inc., USA). PCT Int. Appl. WO 2001047569 A1 20010705, 35 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL,

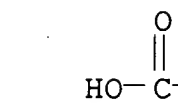
PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US34497 20001219. PRIORITY: US 1999-473166 19991228.

AB **Absorbent** structures that form superabsorbent polymers in situ, useful for disposable **absorbent** products for body fluids, are described. The structures include an **absorbent** material and a cellulosic fibrous material contg. an activating agent (5-80% of the fibrous material). The fibrous material releases the activating agent upon stimulation with an activator, which causes the polymer to become a superabsorbent polymer. The **absorbent** component is desirably a water-swellable, water-insol. polymer, such as polyacrylic acid, polyacrylamides, polyvinyl alcs., ethylenemaleic anhydride copolymer, polyvinyl ethers, polyvinylpyrrolidones, polyvinylmorpholines, carboxymethyl celluloses, carboxymethyl starches, hydroxypropyl celluloses, algins, alginates, carrageenans, acrylic grafted starches, acrylic grafted celluloses, polyaspartic acid, polyglutamic acid, polyamines, polyethyleneimines, polyacrylamides, polydiallyldimethylammonium hydroxide, polyquaternary ammoniums, chitins, **chitosans**, polyasparagines, polyglutamines, polylysines, polyarginines, and their mixts. and copolymers. The activating agent is selected from the group consisting of sodium carbonate, sodium bicarbonate, polyamines, polyimines, polyamides, polyquaternary ammoniums, chitins, **chitosans**, polyasparagines, polylysines, polyarginines, aliph. amines, arom. amines, imines, amides, metallic oxides, hydroxides, salts, ammonia, sodium hydroxide, potassium hydroxide, polyacrylic acid, polymaleic acid, CM-cellulose, alginic acid, polyaspartic acid, polyglutamic acid, citric acid, glutamic acid, aspartic acid, inorg. acid, salts, isosaccharinic acid, tartaric **acid**, **oxalic acid**, malonic acid, glucuronic acid, and their mixts. and copolymers. Methods of making the activating agent contg. fibrous material are provided.

IT **144-62-7**, **Oxalic acid**, biological studies **9012-76-4**, **Chitosan**
(**absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM A61L015-60
ICS D21C009-00; A61L015-18; A61L015-28
CC 63-7 (Pharmaceuticals)
IT Cellulose pulp
Ionization
Superabsorbents
(**absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Acids, biological studies
Amides, biological studies
Bases, biological studies
Hydroxides (inorganic)
Imines
Oxides (inorganic), biological studies
Polyamides, biological studies
Polyamines
Polymers, biological studies
Salts, biological studies
(**absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Medical goods
(**absorbents**; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Amines, biological studies
(aliph.; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Amines, biological studies
(arom.; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Fibers
(cellulosic; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Acids, biological studies
(inorg.; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT **Absorbents**
(medical; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)
IT Imines
(polyimines; **absorbent** material based on cellulosic

fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT Quaternary ammonium compounds, biological studies
(polymers; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT Polyesters, biological studies
(unsatd.; **absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

IT 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 77-92-9, Citric acid, biological studies 79-10-7D, Acrylic acid, grafts with cellulose or starch 87-69-4, Tartaric acid, biological studies 141-82-2, Malonic acid, biological studies 144-55-8, Sodium bicarbonate, biological studies **144-62-7, Oxalic acid,** biological studies 497-19-8, Sodium carbonate, biological studies 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1398-61-4, Chitin 1518-54-3, Isosaccharinic acid 7664-41-7, Ammonia, biological studies 9000-07-1, Carrageenan 9002-89-5, Polyvinyl alcohol 9002-98-6 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-19-4, Poly(vinyl ether) 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose 9004-34-6D, Cellulose, grafts with acrylic acid, biological studies 9004-64-2, Hydroxypropyl cellulose 9005-25-8D, Starch, grafts with acrylic acid, biological studies 9005-32-7, Alginic acid 9005-38-3, Algin 9006-26-2, Ethylenemaleic anhydride copolymer **9012-76-4, Chitosan** 9057-06-1, Carboxymethyl starch 24937-47-1, Polyarginine 24991-23-9 25104-18-1, Polylysine 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 26063-13-8, Polyaspartic acid 26099-09-2, Polymaleic acid 26700-71-0, Polyglutamine 26894-34-8, Polyasparagine 28088-48-4, Polyasparagine 31851-82-8 37522-67-1, Diallyldimethylammonium hydroxide polymer 38000-06-5, Polylysine 69864-43-3, Polyglutamine 70332-45-5, L-Glucuronic acid
(**absorbent** material based on cellulosic fibers contg. activating agent for superabsorbent polymers for disposable **absorbent** products)

L33 ANSWER 6 OF 15 HCA COPYRIGHT 2005 ACS on STN
135:82055 Cellulosic fibrous materials containing an activating agent for disposable **absorbent** products. Sun, Tong; Lonsky, Werner; Li, Yong; Qin, Jian; Zhang, Xiaomin; Dutkiewicz, Jack (Kimberly-Clark Worldwide, Inc., USA). PCT Int. Appl. WO 2001047568 A1 20010705, 33 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ,

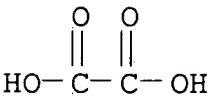
EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US34490 20001219. PRIORITY: US 1999-473164 19991228.

AB **Absorbent** structures that form superabsorbent polymers in situ, useful in disposable **absorbent** products for body fluids, are described. The structures include an **absorbent** polymeric material and a cellulosic fibrous material contg. an activating agent, such as sodium carbonate and sodium bicarbonate. The fibrous material releases the activating agent upon stimulation with an activator, which causes the polymer to become a superabsorbent polymer. The **absorbent** component is desirably a water-swellable, water-insol. polymer, e.g., polyacrylic acid. Methods of making the activating agent contg. fibrous material are provided.

IT **144-62-7, Oxalic acid,** biological studies **9012-76-4, Chitosan**
(cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM A61L015-60
ICS D21C009-00; A61L015-18; A61L015-28; D21H023-14

CC 63-7 (Pharmaceuticals)

IT Medical goods
(**absorbents;** cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Amines, biological studies
(aliph.; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Amines, biological studies
(arom.; cellulosic fibrous materials contg. activating agents for

superabsorbent polymers for disposable **absorbent** products)

IT Cellulose pulp
Mercerization
(cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Acids, biological studies
Amides, biological studies
Bases, biological studies
Hydroxides (inorganic)
Imines
Polyamides, biological studies
Polyamines
Salts, biological studies
(cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Fibers
(cellulosic; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Acids, biological studies
(inorg.; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT **Absorbents**
(medical; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Imines
(polyimines; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Superabsorbents
(polymers; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Quaternary ammonium compounds, biological studies
(polymers; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Polymers, biological studies
(superabsorbents; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT Polyesters, biological studies
(unsatd.; cellulosic fibrous materials contg. activating agents

for superabsorbent polymers for disposable **absorbent** products)

IT 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 141-82-2, Malonic acid, biological studies 144-55-8, Sodium bicarbonate, biological studies **144-62-7, Oxalic acid,** biological studies 497-19-8, Sodium carbonate, biological studies 1310-58-3, Potassium hydroxide, biological studies 1398-61-4, Chitin 1518-54-3, Isosaccharinic acid 6556-12-3, Glucuronic acid 7664-41-7, Ammonia, biological studies 9004-32-4, Carboxymethyl cellulose 9004-34-6, Cellulose, biological studies 9005-32-7, Alginic acid **9012-76-4, Chitosan** 24937-47-1, Polyarginine 24991-23-9 25104-18-1, Polylysine 25212-18-4, Polyarginine 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 26063-13-8, Polyaspartic acid 26099-09-2, Poly(maleic acid) 26894-34-8, Polyasparagine 28088-48-4, Polyasparagine 38000-06-5, Polylysine
(cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT 1310-73-2, Sodium hydroxide, uses
(fibrous materials mercerization with; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT 9003-01-4, Polyacrylic acid
(gels; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

IT 124-38-9, Carbon dioxide, uses
(mercerized fibrous materials treatment with; cellulosic fibrous materials contg. activating agents for superabsorbent polymers for disposable **absorbent** products)

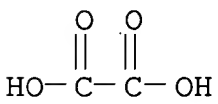
L33 ANSWER 7 OF 15 HCA COPYRIGHT 2005 ACS on STN

134:198075 Triglyceride-free compositions and methods for enhanced **absorption** of hydrophilic therapeutic agents. Patel, Mahesh V.; Chen, Feng-Jing (Lipocine, Inc., USA). PCT Int. Appl. WO 2001012155 A1 20010222, 113 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US18807 20000710. PRIORITY: US 1999-375636 19990817.

AB The present invention relates to triglyceride-free pharmaceutical compns., pharmaceutical systems, and methods for enhanced **absorption** of hydrophilic therapeutic agents. The compns. and systems include an **absorption** enhancing carrier, where the carrier is formed from a combination of at least two surfactants, at least one of which is hydrophilic. A hydrophilic therapeutic agent can be incorporated into the compn., or can be co-administered with the compn. as part of a pharmaceutical system. The invention also provides methods of treatment with hydrophilic therapeutic agents using these compns. and systems. For example, when a compn. contg. Cremophor RH40 0.30, Arlacel 186 0.20, Na taurocholate 0.18, and propylene glycol 0.32 g, resp., was used, the relative **absorption** of PEG 4000 as a model macromol. drug was enhanced by 991%.

IT **144-62-7, Oxalic acid,** biological studies **9012-76-4, Chitosan 9012-76-4D , Chitosan,** conjugates with antipain and EDTA
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61K009-00
ICS A61K009-14; A61K009-16; A61K009-20; A61K009-22; A61K009-28; A61K009-48
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
ST hydrophilic drug surfactant **absorption** enhancement
IT Lysophospholipids
(C18; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Diglycerides
Glycerides, biological studies
Monoglycerides
(C8-10 monoglycerides and diglycerides; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Glycerides, biological studies
(C8-10, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Glycerides, biological studies
(C8-18 and C18-unsatd. mono- and di-, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Antibodies
(Fc fragment, fusion protein with TNF receptor; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Lung
Mucous membrane
(administration by; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(aerosols; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Phenols, biological studies
(alkyl, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fats and Glyceridic oils, biological studies
(almond, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Antiarthritics
(anti-gout agents; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(beads; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Natural products, pharmaceutical
(belladonna; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(buccal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(capsules; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Gelatins, biological studies
(capsules; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Gonadotropins
(chorionic; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Analgesics
Anthelmintics
Anti-inflammatory agents

Antianginal agents
Antiarrhythmics
Antiasthmatics
Antibacterial agents
Anticoagulants
Anticonvulsants
Antidepressants
Antidiabetic agents
Antifoaming agents
Antihistamines
Antihypertensives
Antimalarials
Antimigraine agents
Antiparkinsonian agents
Antipsychotics
Antitumor agents
Antitussives
Antiviral agents
Anxiolytics
Blood serum
Buffers
Chelating agents
Compression
Diuretics
Drug delivery systems
Encapsulation
Extrusion, nonbiological
Flavoring materials
Fungicides
Hypnotics and Sedatives
Immunosuppressants
Inotropics
Molding
Muscarinic antagonists
Muscle relaxants
Nervous system stimulants
Nutrients
Peptidomimetics
Plasticizers
Preservatives
Protozoacides
Solubilizers
Spheronization
Surfactants
Vaccines
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Acrylic polymers, biological studies

Alcohols, biological studies
Amides, biological studies
Amino acids, biological studies
Carbohydrates, biological studies
Corticosteroids, biological studies
Cytokines
Diglycerides
Elastins
Enkephalins
Esters, biological studies
Fatty acids, biological studies
Genetic element
Glycerides, biological studies
Glycosides
Interleukin 2
Interleukin 3
Lecithins
Lysophosphatidic acids
Lysophosphatidylcholines
Lysophosphatidylethanolamines
Lysophosphatidylserines
Macromolecular compounds
Nucleic acids
Nucleosides, biological studies
Nucleotides, biological studies
Oligonucleotides
Peptides, biological studies
Phosphatidic acids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylglycerols
Phosphatidylserines
Phospholipids, biological studies
Platelet-derived growth factors
Polyoxyalkylenes, biological studies
Proteins, general, biological studies
Sex hormones
Shellac
Sterols
Sulfonic acids, biological studies
Tannins
Toxoids
Tumor necrosis factors
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(controlled-release; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Glycerides, biological studies
(corn, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Bath preparations
(douches; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(drops; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(elixirs; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(emulsions; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Castor oil
(ethoxylated, Emalex C40; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Sterols
(ethoxylated; Nikkol BPS 30, compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Corn oil
Ethers, biological studies
Palm kernel oil
Sterols
(ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Tumor necrosis factor receptors
(fusion protein with antibody Fc fragment; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drugs
(gastrointestinal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(gels; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(granules; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Vaccines
(hepatitis A; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Vaccines
(hepatitis B; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Castor oil

(hydrogenated, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Vaccines
(influenza; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Enzymes, biological studies
Thyroid hormones
(inhibitors; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Skin preparations (pharmaceutical)
(keratolytics; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Lipids, biological studies
(lipid regulating agents; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(lotions; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Lysophosphatides
(lysophosphatidylglycerols; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Vaccines
(measles; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Polymers, biological studies
(mucoadhesive; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Vaccines
(mumps; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(nasal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Surfactants
(nonionic; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(ointments, creams; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(ointments; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(oral; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems

(particles; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(pastes; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(pellets; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Antioxidants
(pharmaceutical; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Infection
(plague, vaccines; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Alcohols, biological studies
(polyhydric; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Phosphatidylethanolamines, biological studies
(reaction products, with PEG and PVP; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(rectal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fatty acids, biological studies
(salts, carnitine; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(solns.; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Sterols
(soya, ethoxylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(sprays; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Monoglycerides
(succinylated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(suppositories, vaginal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(suppositories; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(suspensions; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT Drug delivery systems
(sustained-release; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(syrups; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Glycosides
(thioglycosides, alkyl esters; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Haemophilus influenzae
(type b, conjugated vaccines; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Human poliovirus
(vaccine; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Japanese encephalitis virus
Mycobacterium BCG
Neisseria meningitidis
Rabies
Rotavirus
Streptococcus pneumoniae
Typhoid fever
(vaccines; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Drug delivery systems
(vaginal; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Human herpesvirus 3
(varicella from, vaccines; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Infection
(variola, vaccines; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fats and Glyceridic oils, biological studies
(vegetable, ethoxylated, hydrogenated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fats and Glyceridic oils, biological studies
(vegetable, hydrogenated; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fats and Glyceridic oils, biological studies
(vegetable; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Fever and Hyperthermia
(yellow, vaccines; compns. for enhanced **absorption** of

hydrophilic drugs using combination of surfactants)
IT Interferons
(.alpha.; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Adrenoceptor antagonists
(.beta.-; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT Interferons
(.beta.; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 9011-29-4, Nikkol GS 6
(Nikkol GS 460; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 9005-25-8, Starch, biological studies
(capsules; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 59277-89-3, Acyclovir
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 63585-09-1, Foscarnet sodium
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 50-21-5, Lactic acid, biological studies 50-21-5D, Lactic acid, acyl esters 50-56-6, Oxytocin, biological studies 50-70-4, **Sorbitol**, biological studies 50-81-7, Ascorbic acid, biological studies 51-15-0, Pralidoxime chloride 51-43-4, Epinephrine 51-55-8, Atropine, biological studies 51-60-5, Neostigmine methyl sulfate 52-24-4, Thiotepa 53-79-2, Puromycin 56-81-5, Glycerol, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 57-13-6, Urea, biological studies 57-22-7, Vincristine 57-55-6, Propylene glycol, biological studies 57-55-6D, Propylene glycol, ethers 57-64-7, Physostigmine salicylate 57-88-5, Cholesterol, biological studies 57-94-3, Tubocurarine chloride 59-05-2, Methotrexate 60-00-4, EDTA, biological studies 60-00-4D, EDTA, conjugates with antipain and **chitosan** 60-31-1, Acetylcholine chloride 60-33-3, Linoleic acid, biological studies 62-31-7, Dopamine hydrochloride 63-91-2, Phenylalanine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 65-28-1, Phentolamine mesylate 65-85-0, Benzoic acid, biological studies 66-71-7, 1,10-Phenanthroline 67-42-5, EGTA 68-11-1, Thioglycolic acid, biological studies 68-19-9, Vitamin B12 69-65-8, Mannitol 69-72-7, Salicylic acid, biological studies 69-79-4D, Maltose, alkyl esters 69-93-2, Uric acid, biological studies 70-51-9, Deferoxamine 71-27-2, Suxamethonium chloride 74-89-5, Methanamine, biological studies 75-75-2, Methanesulfonic acid 77-19-0, Dicyclomine 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, glycerides

79-09-4, Propionic acid, biological studies 79-10-7, Acrylic acid, biological studies 79-10-7D, Acrylic acid, polymers 81-24-3, Taurocholic acid 81-25-4, Cholic acid 83-44-3, Deoxycholic acid 87-69-4, Tartaric acid, biological studies 87-69-4D, Tartaric acid, glycerides 89-57-6, Mesalamine 89-65-6, Isoascorbic acid 101-26-8, Pyridostigmine bromide 102-71-6, Triethanolamine, biological studies 104-15-4, p-Toluenesulfonic acid, biological studies 107-15-3, Ethylenediamine, biological studies 107-21-1, Ethylene glycol, biological studies 107-92-6, Butyric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-27-0, Isopropyl myristate 111-62-6, Ethyl oleate 112-80-1, Oleic acid, biological studies 114-07-8, Erythromycin 114-80-7, Neostigmine bromide 115-77-5, Pentaerythritol, biological studies 121-44-8, Triethylamine, biological studies 122-20-3, Triisopropanolamine 124-04-9, Adipic acid, biological studies 124-07-2, Caprylic acid, biological studies 128-13-2, Ursodeoxycholic acid 129-06-6, Warfarin sodium 131-49-7, Diatrizoate meglumine 138-36-3, p-Bromobenzenesulfonic acid 140-64-7, Pentamidine isethionate 141-22-0, Ricinoleic acid 141-43-5, Ethanolamine, biological studies 142-62-1, Caproic acid, biological studies 142-91-6, Isopropyl palmitate 143-07-7, Lauric acid, biological studies 143-07-7D, Lauric acid, Macrogol glycerides 144-55-8, Sodium hydrogen carbonate, biological studies **144-62-7, Oxalic acid**, biological studies 145-42-6, Sodium taurocholate 147-94-4, Cytarabine 148-24-3, 8-Quinolinol, biological studies 151-21-3, Sodium lauryl sulfate, biological studies 151-41-7, Lauryl sulfate 154-21-2, Lincomycin 155-97-5, Pyridostigmine 299-42-3, Ephedrine 334-48-5, Capric acid 360-65-6, Glycodeoxycholic acid 434-13-9, Lithocholic acid 463-40-1, Linolenic acid 463-79-6, Carbonic acid, biological studies 471-34-1, Calcium carbonate, biological studies 474-25-9, Chenodeoxycholic acid 475-31-0, Glycocholic acid 516-35-8, Taurochenodeoxycholic acid 516-50-7, Taurodeoxycholic acid 526-95-4, Gluconic acid 541-15-1D, Carnitine, fatty acid ester salts 544-35-4, Ethyl linoleate 544-63-8, Myristic acid, biological studies 577-11-7, Sodium docusate 616-91-1, N-Acetylcysteine 640-79-9, Glycochenodeoxycholic acid 665-66-7, Amantadine hydrochloride 737-31-5, Diatrizoate sodium 863-57-0, Sodium glycocholate 865-21-4, Vinblastin 1002-62-6, Sodium caprate 1115-70-4, Metformin hydrochloride 1264-72-8, Colistin sulfate 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1319-82-0, Aminocaproic acid 1327-43-1, Magnesium aluminum silicate 1330-80-9, Propylene glycol monooleate 1335-30-4, Aluminum silicate 1336-21-6, Ammonium hydroxide 1338-39-2, Span 20 1338-41-6, **Sorbitan** monostearate

1338-43-8, Span 80 1397-89-3, Amphotericin B 1403-66-3, Gentamycin 1404-90-6, Vancomycin 1405-20-5, Polymixin B sulfate 1405-37-4, Capreomycin sulfate 1405-87-4, Bacitracin 1492-18-8, Leucovorin calcium 1501-84-4, Rimantadine hydrochloride 1684-40-8, Tacrine hydrochloride 1695-77-8, Spectinomycin 1935-18-8, Palmitoyl carnitine 2016-88-8, Amiloride hydrochloride 2364-67-2, Palmitoyl carnitine 2466-77-5, Lauroyl carnitine 2646-38-0, Sodium chenodeoxycholate 2898-95-5, Sodium ursodeoxycholate 3056-17-5, Stavudine 3485-62-9, Clidinium bromide 3778-73-2, Isofosfamide 3858-83-1, P-Aminobenzamidine 4291-63-8, Cladribine 5534-95-2, Pentagastrin 6303-21-5D, Phosphinic acid, dipeptide derivs. 6493-05-6, Pentoxifylline 7087-68-5, Diisopropylethylamine 7481-89-2, Zalcitabine 7585-39-9D, .beta.-Cyclodextrin, ethers with propanediol 7647-01-0, Hydrochloric acid, biological studies 7648-98-8, Ambenonium 7664-38-2, Phosphoric acid, biological studies 7664-93-9, Sulfuric acid, biological studies 7664-93-9D, Sulfuric acid, alkyl esters, salts, biological studies 7697-37-2, Nitric acid, biological studies 8007-43-0, **Sorbitan** sesquioleate 8068-28-8, Colistimethate sodium 9001-28-9, Factor IX 9002-01-1, Streptokinase 9002-60-2, Corticotropin, biological studies 9002-92-0, Brij 35 9002-96-4 9003-01-4D, Polyacrylic acid, conjugates with bacitracin 9003-39-8D, Polyvinylpyrrolidone, reaction products with phosphatidylethanolamine 9004-10-8, Insulin, biological studies 9004-17-5, Insulin protamine zinc 9004-32-4D, Carboxymethyl cellulose, conjugates with pepstatin 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, ethers, biological studies 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 9004-81-3 9004-95-9, Polyethylene glycol cetyl ether 9004-96-0, Crodet O40 9004-98-2, Polyoxyethylene oleyl ether 9004-99-3 9005-00-9, Polyoxyethylene stearyl ether 9005-02-1, Kessco PEG 300DL 9005-07-6, Kessco PEG 1540DO 9005-08-7 9005-32-7, Alginic acid 9005-63-4D, fatty acid esters 9005-64-5, Tween 20 9005-65-6, Polysorbate 80 9005-66-7, Tween 40 9005-67-8, Tween 60 9007-48-1, Plurol Oleique 9007-92-5, Glucagon, biological studies 9011-21-6 **9012-76-4, Chitosan 9012-76-4D, Chitosan**, conjugates with antipain and EDTA 9015-68-3, Asparaginase 9034-40-6, Gonadotropin releasing hormone 9035-81-8, Trypsin inhibitor 9036-19-5 9039-53-6, Urokinase 9041-93-4, Bleomycin sulfate 9050-31-1, Hydroxypropylmethyl cellulose phthalate 9062-90-2 9063-46-1 9076-44-2, Chymostatin 9078-38-0, Soybean trypsin inhibitor 9087-70-1, Pancreatic trypsin inhibitor 10034-85-2, Hydriodic acid 10035-10-6, Hydrobromic acid, biological studies 10041-19-7D, derivs. 10043-35-3, Boric acid, biological studies 10596-23-3 11000-17-2, Vasopressin 11061-68-0, Human insulin 11140-04-8, Imwitor 988 12584-58-6, Porcine insulin 12629-01-5, Human growth hormone 13265-10-6,

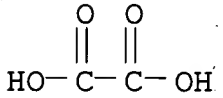
Methscopolamine 13284-86-1, Sodium lithocholate 13780-71-7D, Boronic acid, .alpha.-aminoalkyl derivs. 14440-80-3, Stearoyl-2-lactylate 14605-22-2, Tauroursodeoxycholic acid 15500-66-0, Pancuronium bromide 15663-27-1, Cisplatin 15686-71-2, Cephalexin 15826-37-6, Cromolyn sodium 16679-58-6, Desmopressin 16960-16-0, Cosyntropin 17438-29-8 18323-44-9, Clindamycin 18883-66-4, Streptozocin 20537-88-6, Amifostine 21215-62-3, Calcitonin human 21645-51-2, Aluminum hydroxide, biological studies
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

IT 21679-14-1, Fludarabine 22254-24-6, Ipratropium bromide 22882-95-7, Isopropyl linoleate 23031-32-5, Terbutaline sulfate 23214-92-8, Doxorubicin 24356-60-3, Cephapirin sodium 24938-16-7, Eudragit E 25126-32-3, Sincalide 25168-73-4, Sucrose monostearate 25212-88-8, Eudragit L100-55 25322-68-3, Polyethylene glycol 25339-99-5, Sucrose monolaurate 25496-72-4, Monoolein 25597-07-3, Myristoylcarnitine 25637-84-7, Glyceryl dioleate 25637-97-2, Sucrose dipalmitate 26264-14-2D, Propanediol, ethers with .beta.-cyclodextrin 26266-57-9, **Sorbitan** monopalmitate 26266-58-0, **Sorbitan** trioleate 26402-22-2, Glyceryl monocaprate 26402-26-6, Glyceryl monocaprylate 26446-38-8, Sucrose monopalmitate 26589-39-9, Eudragit S 26658-19-5, **Sorbitan** tristearate 26839-75-8, Timolol 27164-46-1, Cefazolin sodium 27195-16-0, Sucrose distearate 27214-38-6, Nikkol MGM 27215-38-9, Imwitor 312 27638-00-2, Glyceryl dilaurate 29122-68-7, Atenolol 30516-87-1, Zidovudine 31694-55-0D, C8-10-esters 33434-24-1, Eudragit RL 33515-09-2, Gonadorelin 33564-30-6, Cefoxitin sodium 34787-01-4, Ticarcillin 36354-80-0, Glyceryl dicaprylate 36791-04-5, Ribavirin 37220-82-9, Peceol 37321-62-3, Lauroglycol 37330-34-0, Bowman-Birk inhibitor 37330-34-0D, Bowman-Birk inhibitor, conjugates with polyacrylic acid 37691-11-5, Antipain 37691-11-5D, Antipain, conjugates with **chitosan** and EDTA 38916-34-6, Somatostatin 39324-30-6, Pepstatin 39324-30-6D, Pepstatin, conjugates with CM-cellulose 39366-43-3, Magnesium aluminum hydroxide 39438-11-4, **Sorbitan** monocaprate 41575-94-4, Carboplatin 42057-22-7, Mezlocillin sodium 42540-40-9, Cefamandole nafate 42766-91-6, Nikkol DHC 42907-92-6, Sodium tauro-24,25-dihydrofusidate 47931-85-1, Calcitonin salmon 50700-72-6, Vecuronium bromide 51192-09-7, Tagat O2 51384-51-1, Metoprolol 51822-44-7, Eudragit L 51938-44-4, **Sorbitan** sesquistearate 52504-24-2, Softigen 767 52581-71-2, Volpo 3 52907-01-4, Cellulose acetate trimellitate 53168-42-6, Myvacet 9-45 53237-50-6 53910-25-1, Pentostatin 53988-07-1, Glyceryl dicaprate 54063-53-5, Propafenone 54392-26-6, **Sorbitan** monoisostearate 54910-89-3, Fluoxetine 55123-66-5, Leupeptin 56180-94-0,

Acarbose 57107-95-6 57171-56-9 57248-88-1, Pamidronate disodium 58561-47-0, Softigen 701 58970-76-6, Bestatin 59227-89-3, 1-Dodecylazacycloheptan-2-one 59703-84-3, Piperacillin sodium 59721-29-8, Camostat mesylate 60177-36-8, **Sorbitan** monocaprylate 61270-78-8, Cefonicid sodium 61489-71-2, Menotropin 61869-08-7, Paroxetine 62013-04-1, Dirithromycin 62288-83-9, Desmopressin acetate 62893-19-0, Cefoperazone 63527-52-6, Cefotaxime 64228-81-5, Atracurium besylate 64480-66-6, Glycoursodeoxycholic acid 64544-07-6, Cefuroxime axetil 66376-36-1, Alendronate 66419-50-9, Bovine growth hormone 67352-02-7 67655-94-1, Amastatin 68099-86-5, Bepridil hydrochloride 68401-81-0, Ceftizoxime 68795-69-7, Propylene glycol monocaprate 68958-64-5 69049-74-7, Nedocromil sodium 69070-98-0 69227-93-6, Lauryl .beta.-maltopyranoside 69655-05-6, Didanosine 70458-92-3, Pefloxacin 70458-96-7, Norfloxacin 71486-22-1, Vinorelbine 73384-59-5, Ceftriaxone 74011-58-8, Enoxacin 74356-00-6, Cefotetan disodium 74381-53-6, Leuprolide acetate 76420-72-9, Enalaprilat 76470-66-1, Loracarbef 78110-38-0, Aztreonam 79350-37-1, Cefixime 79517-01-4, Octreotide acetate 79665-92-2 79665-93-3 81161-17-3, Esmolol hydrochloride 82410-32-0, Ganciclovir 82419-36-1, Ofloxacin 83869-56-1, Granulocyte-macrophage colony stimulating factor 83905-01-5, Azithromycin 85721-33-1, Ciprofloxacin 87679-37-6, Trandolapril 88669-04-9, Trospectomycin 89703-10-6, FK-448 89987-06-4, Tiludronate 93790-70-6, Cholylsarcosine 93790-72-8, N-Methyltaurocholic acid 93792-59-7, Hydroxypropylmethyl cellulose succinate 94749-08-3, Salmeterol xinafoate 98036-77-2, Hydrotalcite 98079-51-7, Lomefloxacin 100986-85-4, Levofloxacin 104227-87-4, Famciclovir 105287-09-0, Aquateric 105462-24-6, Risedronic acid 106392-12-5, Polyoxyethylene-polyoxypropylene block copolymer 106819-53-8, Doxacurium chloride 106861-44-3, Mivacurium chloride 107648-80-6, Cefepime hydrochloride 110871-86-8, Sparfloxacin 113189-02-9, Antihemophilic factor 113852-37-2, Cidofovir 116094-23-6, Insulin aspart 119914-60-2, Grepafloxacin 121368-58-9, Olpadronate 121548-04-7, Gelucire 44/14 121548-05-8, Gelucire 50/13 124832-26-4, Valaciclovir 126467-48-9, Porcine somatotropin 127759-89-1, Lobucavir 127829-97-4, Solulan C 24 133107-64-9, Insulin lispro 134678-17-4, Lamivudine 137862-53-4, Valsartan 138636-14-3, Eudragit NE 139110-80-8, Zanamivir 139639-23-9, Tissue type plasminogen activator 142368-40-9, Imwitor 375 143003-46-7, Alglucerase 143011-72-7, Granulocyte colony stimulating factor 146961-76-4, Alatrofloxacin 147059-72-1, Trovafloxacin 148046-81-5, Gelucire 33/01 148553-50-8, Pregabalin 150372-93-3, Glycerox L 151126-32-8, Pramlintide 154361-50-9, Capecitabine 156259-68-6, Capmul MCM 157810-81-6, Indinavir sulfate 160337-95-1, Insulin glargine 169148-63-4, Insulin detemir

173146-27-5, Denileukin diftitox 191588-94-0, TNK-tPA
679809-58-6, Enoxaparin sodium
(compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 9001-92-7, Proteinase
(inhibitors; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)
IT 9003-98-9, Dornase 11096-26-7, Epoetin
(.alpha.; compns. for enhanced **absorption** of hydrophilic drugs using combination of surfactants)

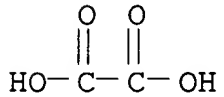
L33 ANSWER 8 OF 15 HCA COPYRIGHT 2005 ACS on STN
129:347330 Swellable polymeric medical implant. Lee, Yong Chan (S. Korea). PCT Int. Appl. WO 9848861 A1 **19981105**, 12 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1997-KR258 19971205. PRIORITY: KR 1997-16481 19970426.
AB A medical implant coated with a polymeric material having hydrophilicity and osteocond. When the implant is embedded in depth in a living body, the polymeric material **absorbs** moisture to swell up, bringing about an effect of dispersing the external stress applied to the implant. This volumetric increase also brings the implant into close contact with the bone of the implantation site, thus remarkably improving the stability in the early stage of the implantation and more strengthening the osteointegration of the implant in the bone as time passes.
IT **144-62-7D, Oxalic acid**, polyalkylene derivs. **9012-76-4, Chitosan**
(swellable polymeric medical implant)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61L027-00
ICS A61F002-28; A61C008-00; A61C013-00

CC 63-7 (Pharmaceuticals)
IT **144-62-7D, Oxalic acid**, polyalkylene derivs. 9000-30-0, Guar gum 9002-89-5, Polyvinyl alcohol 9003-20-7, Polyvinylacetate 9004-34-6, Cellulose, biological studies 9004-36-8, Cellulose acetate butyrate **9012-76-4, Chitosan** 9016-00-6, Polydimethylsiloxane 25014-27-1, Poly-.gamma.-benzyl-L-glutamate 25014-41-9, Polyacrylonitrile 25038-53-3 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26161-42-2 26680-10-4, Poly-DL-lactide 26780-50-7, Polyglycolide-lactide 31900-57-9, Polydimethylsiloxane 33135-50-1, Poly-L-lactide
(swellable polymeric medical implant)

L33 ANSWER 9 OF 15 HCA COPYRIGHT 2005 ACS on STN
128:55414 Ink-jet printing sheet for transparency preparation. Malhotra, Shadi L.; Naik, Kirit N.; MacKinnon, David N.; Jones, Arthur Y. (Xerox Corp., USA). U.S. US 5683793 A **19971104**, 20 pp. (English). CODEN: USXXAM. APPLICATION: US 1996-657134 19960603.
AB The title printing sheet comprises a supporting substrate, there over a first coating layer comprised of an ink-**absorbing** layer and a biocide and a second ink-spreading coating layer comprised of a hydrophilic vinyl binder, a dye mordant, a filler, an optional light fastness-inducing agent, and an ink spot size-increasing agent selected from the group consisting of hydroxy acids, amino acids, and polycarboxyl compds., wherein the first coating layer is in contact with the substrate and is situated between the substrate and the second ink coating layer and the transparency prepd. possesses a haze value of from about 0.5 to about 10 and a light fastness value of from about 95 to about 98.
IT **144-62-7, Oxalic acid**, uses **9012-76-4, Chitosan**
(ink-jet printing sheets for transparency prepn. contg.)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM B41M005-00
NCL 428216000
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Acids, uses
Gelatins, uses
(ink-jet printing materials contg. ink-**absorbing** and ink-spreading layers contg.)

IT Projection slides
(ink-jet printing materials contg. ink-**absorbing** and ink-spreading layers for prodn. of)

IT Ink-jet printing
(materials contg. ink-**absorbing** and ink-spreading layers for transparency prepn.)

IT 50-21-5, Lactic acid, uses 52-52-8, 1-Amino-1-cyclopentane carboxylic acid 52-90-4, L-Cysteine, uses 55-10-7, 4-Hydroxy-3-methoxy mandelic acid 56-12-2, 4-Aminobutyric acid, uses 56-40-6, Glycine, uses 56-41-7, Alanine, uses 56-45-1, L-Serine, uses 56-84-8, L-Aspartic acid, uses 56-85-9, L-Glutamine, uses 56-86-0, L-Glutamic acid, uses 56-87-1, L-Lysine, uses 56-89-3, L-Cystine, uses 56-91-7, 4-Amino methyl benzoic acid 57-08-9, 6-Acetamido hexanoic acid 60-00-4, Ethylene diamine tetraacetic acid, uses 60-18-4, L-Tyrosine, uses 60-32-2, 6-Amino caproic acid 61-78-9, 4-Aminohippuric acid 61-90-5, L-Leucine, uses 63-68-3, Methionine, uses 63-84-3, 3-(3,4-Dihydroxy phenyl)-alanine 63-91-2, L-Phenylalanine, uses 65-82-7, N-Acetyl-methionine 67-43-6, Diethylenetriamine pentaacetic acid 70-18-8, uses 70-47-3, L-Asparagine, uses 70-49-5, Mercapto succinic acid 71-00-1, L-Histidine, uses 72-18-4, Valine, uses 72-19-5, Threonine, uses 73-22-3, L-Tryptophan, uses 73-32-5, Isoleucine, uses 74-79-3, L-Arginine, uses 75-21-8D, Oxirane, ionene triblock polymers, uses 76-93-7, Benzilic acid, uses 79-14-1, Glycolic acid, uses 81-16-3, 2-Amino-1-naphthalene sulfonic acid 87-69-4, uses 88-45-9, 2,5-Diamino benzene sulfonic acid 88-99-3, 1,2-Benzenedicarboxylic acid, uses 89-05-4, 1,2,4,5-Benzene tetracarboxylic acid 89-51-0, Homophthalic acid 89-57-6 90-64-2, Mandelic acid 93-62-9, N-(2-Hydroxyethyl) iminodiacetic acid 98-67-9, 4-Hydroxy benzene sulfonic acid 99-14-9, 1,2,3-Propane tricarboxylic acid 99-16-1, Allantoic acid 99-31-0, 5-Amino isophthalic acid 99-68-3, 2-(Carboxymethyl thio) succinic acid 100-21-0, 1,4-Benzenedicarboxylic acid, uses 102-32-9, Dihydroxy phenylacetic acid 106-14-9, 12-Hydroxystearic acid 107-35-7, 2-Aminoethane sulfonic acid 107-95-9, .beta.-Alanine 110-15-6, Butanedioic acid, uses 110-16-7, 2-Butenedioic acid (Z)-, uses 110-17-8, 2-Butenedioic acid (E)-, uses 110-94-1, Glutaric acid 110-99-6, Diglycolic acid 111-16-0, Pimelic acid 111-20-6, Decanedioic acid, uses 121-34-6, 4-Hydroxy-3-methoxy benzoic acid 121-57-3, Sulfanilic acid 123-99-9, Nonanedioic acid, uses 124-00-5, 2-Dodecenedioic acid 124-04-9, Hexanedioic acid, uses 126-00-1, 4,4-Bis(4-hydroxyphenyl) valeric acid 130-85-8, Pamoic acid

131-54-4, 2,2'-Dihydroxy-4,4'-dimethoxy benzophenone 131-57-7, 2-Hydroxy-4-methoxy benzophenone 136-36-7, Resorcinol mono benzoate 141-82-2, Malonic acid, uses 142-73-4, Imino diacetic acid **144-62-7, Oxalic acid,** uses 150-25-4, Bicine 150-39-0, N-(2-Hydroxyethyl) ethylene diamine triacetic acid 156-38-7 156-39-8 300-85-6, 3-Hydroxybutyric acid 306-08-1, 4-Hydroxy-3-methoxy phenyl acetic acid 320-72-9 327-57-1, L-Norleucine 331-39-5, 3,4-Dihydroxy cinnamic acid 372-75-8, Citrulline 487-54-7, 2-Hydroxyhippuric acid 498-21-5, Methyl succinic acid 498-23-7, Citraconic acid 498-24-8, Mesaconic acid 498-36-2, Pentanoic acid, 2-hydroxy-4-methyl- 499-12-7, 1-Propene-1,2,3-tricarboxylic acid 500-44-7, Leucenol 502-50-1, 4-Ketopimelic acid 505-48-6, Suberic acid 505-52-2, 1,11-Undecane dicarboxylic acid 505-54-4, Hexadecanedioic acid 505-95-3, 12-Hydroxydodecanoic acid 506-13-8 510-20-3, Diethyl malonic acid 516-05-2, Methyl malonic acid 517-60-2, Mellitic acid 526-99-8, Mucic acid 530-57-4, 4-Hydroxy-3,5-dimethoxy benzoic acid 530-59-6, 3,5-Dimethoxy-4-hydroxy cinnamic acid 535-87-5, 3,5-Diaminobenzoic acid 537-73-5, 3-Hydroxy-4-methoxy cinnamic acid 542-05-2, 3-Ketoglutaric acid 543-24-8, Acetamido acetic acid 548-51-6, 2-Hydroxy-3-isopropyl-6-methyl benzoic acid 552-63-6, Tropic acid 556-08-1, 4-Acetamido benzoic acid 556-50-3, Glycyl glycine 583-93-7, 2,6-Diamino pimelic acid 594-61-6, 2-Hydroxyisobutyric acid 597-44-4, Citramalic acid 601-75-2, Ethyl malonic acid 605-70-9, 1,4-Naphthalene dicarboxylic acid 612-40-8, 2-Carboxy cinnamic acid 616-91-1, N-Acetyl-cysteine 617-62-9, 2-Methyl glutaric acid 626-51-7, 3-Methyl glutaric acid 627-95-2, 5-Aminovaleric acid hydrochloride 638-23-3 638-32-4, Succinamic acid 645-08-9, 3-Hydroxy-4-methoxy benzoic acid 657-26-1, Lysine dihydrochloride 657-27-2, Lysine monohydrochloride 658-48-0, .alpha.-Methyl tyrosine 660-88-8, 5-Aminovaleric acid 666-99-9, Agaricic acid 672-15-1, Homoserine 681-57-2, 2,2-Dimethyl glutaric acid 693-23-2, Dodecanedioic acid 693-57-2, 12-Amino dodecanoic acid 701-54-2, 4-Amino methyl cyclohexane carboxylic acid 775-01-9, 3,4-Dihydroxy mandelic acid 821-38-5, 1,12-Dodecane dicarboxylic acid 926-39-6, 2-Amino ethyl hydrogen sulfate 929-17-9, 7-Aminoheptanoic acid 938-97-6, 4-Hydroxy phenyl glycine 943-73-7 1002-57-9, 8-Amino caprylic acid 1071-23-4, 2-Amino ethyl dihydrogen phosphate 1078-61-1, 3,4-Dihydroxy hydro cinnamic acid 1116-22-9, .gamma.-Glutamyl-glutamic acid 1119-34-2, Arginine hydrochloride 1132-26-9, .alpha.-Methyl-phenylalanine 1135-24-6, 4-Hydroxy-3-methoxy cinnamic acid 1141-38-4, 2,6-Naphthalenedicarboxylic acid 1142-20-7, N-Carbobenzyloxy-alanine 1145-80-8, L-Serine, N-[(phenylmethoxy)carbonyl]- 1147-43-9, 2-Aminobenzophenone-2'-carboxylic acid 1149-26-4 1152-61-0 1161-13-3 1164-16-5 1186-65-8 1188-37-0, N-Acetyl-glutamic acid 1197-55-3, 4-Amino phenyl acetic acid 1218-34-4, N-Acetyl-tryptophan 1234-35-1

1321-11-5, Amino benzoic acid 1482-97-9 1483-01-8 1489-63-0 1679-53-4, 10-Hydroxydecanoic acid 1724-02-3, Glutaconic acid 1843-05-6, 2-Hydroxy-4-(octyloxy)benzophenone 1852-04-6, Undecanedioic acid 1916-08-1, 3-Hydroxy-4,5-dimethoxy benzoic acid 1946-82-3, N-Acetyl-L-lysine 1953-02-2, N-(2-Mercapto propionyl) glycine 2018-61-3, N-Acetyl-phenylalanine 2041-14-7, 2-Aminoethyl phosphonic acid 2072-71-1 2121-67-7, 2,4-Dimethyl glutaric acid 2169-87-1, 2,3-Naphthalene dicarboxylic acid 2212-75-1 2215-21-6, 3,5-Diisopropyl salicylic acid 2418-95-3 2432-99-7, 11-Amino undecanoic acid 2450-31-9, Tetracosane dioic acid 2549-87-3, 4-Allyloxy-2-hydroxybenzophenone 2592-18-9, N-(tert-Butoxy carbonyl)threonine 2799-07-7 2835-06-5, 2-Phenyl glycine 2835-81-6, 2-Aminobutyric acid 2840-04-2, 5-Amino-2-methyl benzoic acid 2921-14-4, Carboxymethoxylamine hemihydrochloride 2985-59-3, 2-Hydroxy-4-dodecyloxy benzophenone 3058-01-3, 3-Methyl adipic acid 3061-90-3, Alanyl-phenyl alanine 3147-55-5 3184-13-2, Ornithine hydrochloride 3226-65-1 3262-72-4, N-(tert-Butoxy carbonyl)-serine 3401-73-8 3588-17-8 3639-21-2, 2-Ethyl-2 hydroxybutyric acid 3687-18-1, 3-Amino-1-propane sulfonic acid 3695-24-7, 3-Hydroxy-4-methoxy mandelic acid 3739-30-8, 2-Hydroxy-2-methyl butyric acid 3853-88-1 3864-99-1 4026-18-0, 2-Hydroxy-3-methyl butyric acid 4134-56-9 4165-96-2, 3-Phenyl glutaric acid 4316-23-8, 4-Methyl phthalic acid 4355-11-7, 1,1-Cyclohexane diacetic acid 4389-53-1, 2-Hydroxy-6-isopropyl-3-methyl benzoic acid 4408-64-4, Methyl iminodiacetic acid 4408-81-5, 1-2-Diamino propane-N,N,N',N'-tetraacetic acid 4442-94-8, Hexahydromandelic acid 4767-03-7 4839-46-7, 3,3-Dimethyl glutaric acid 5337-17-7, 4-Amino phenyl phosphonic acid 5429-56-1, 2-Acetamido acrylic acid 5445-51-2, 1,1-Cyclobutane dicarboxylic acid 5469-45-4, .alpha.-Acetamido cinnamic acid 5488-16-4, 2,5-Dihydroxy-1,4-benzene diacetic acid 5653-40-7, 2-Amino-4,5-dimethoxy benzoic acid 5893-05-0, n-Trityl glycine 5949-29-1, Citric acid monohydrate 6000-43-7, Glycine hydrochloride 6003-94-7, Chelidonic acid monohydrate 6020-87-7, Creatine monohydrate 6027-13-0, Homocysteine 6064-63-7, 2-Hydroxy caproic acid 6600-40-4, L-Norvaline 6915-15-7, Malic acid 6940-50-7, 4-Bromo mandelic acid 6969-49-9, Octyl salicylate 7053-88-5, 2-Hydroxy-3-isopropyl benzoic acid 7377-08-4 7412-78-4, Glycyl-glutamic acid 7432-24-8 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0D, Guar, cationic (ink-jet printing sheets for transparency prepn. contg.)

IT 9000-36-6, Karaya gum 9002-18-0, Agar-agar 9002-89-5, Poly(vinyl alcohol) 9002-89-5D, Poly(vinyl alcohol), alkoxylated 9003-05-8, Poly(acrylamide) 9003-06-9, Acrylamide-acrylic acid copolymer 9003-11-6 9003-39-8, Poly(vinyl pyrrolidone) 9004-32-4, Sodium carboxymethyl cellulose 9004-58-4, Ethyl hydroxyethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl

cellulose 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9005-22-5, Sodium cellulose sulfate 9005-25-8, Starch, uses **9012-76-4, Chitosan** 9013-34-7, Diethylaminoethyl cellulose 9015-11-6, Benzyl cellulose 9015-73-0, Diethyl aminoethyl dextran 9032-42-2, Hydroxyethyl methyl cellulose 9033-69-6, Amino deoxycellulose 9036-94-6, Chlorodeoxycellulose 9041-56-9, Hydroxybutyl methyl cellulose 9044-05-7, Carboxymethyl dextran 9064-90-8 9088-04-4, Sodium carboxymethylhydroxyethyl cellulose 10044-27-6 10502-44-0, 4-Methoxy mandelic acid 11138-66-2, Xanthan 13073-35-3, Ethionine 13138-33-5, 3-Aminopropyl phosphonic acid 13139-16-7, N-(tert-Butoxy carbonyl)-isoleucine 13545-04-5, 2,3-Dimethyl succinic acid 13734-28-6 13734-34-4, N-(tert-Butoxy carbonyl)-phenylalanine 13734-41-3 13881-91-9, Amino methane sulfonic acid 13927-77-0, Nickel dibutyldithiocarbamate 14857-77-3 15151-51-6, 3-Amino benzoic acid hydrochloride 15537-71-0, N-Acetyl-penicillamine 15985-39-4 16323-43-6, 1,4-Phenylene diacrylic acid 16432-81-8, 2-(4-Benzoyl-3-hydroxyphenoxy)ethylacrylate 16555-77-4, .alpha.-Hydroxy hippuric acid 16713-66-9, 1,1-Cyclopentanediacetic acid 17994-25-1, 1-Hydroxy-1-cyclopropane carboxylic acid 19360-67-9, 4-Carboxy phenoxy acetic acid 21339-55-9 23289-62-5 23537-25-9 24969-10-6, Epichlorohydrin-ethylene oxide copolymer 25086-29-7 25086-89-9, Vinyl pyrrolidone-vinyl acetate copolymer 25322-68-3 25357-95-3, 1,3,5-Cyclohexane tricarboxylic acid 25429-38-3, Hydroxy cinnamic acid 25805-17-8, Poly(2-ethyl-2-oxazoline) 25832-09-1 26106-63-8, Tetrahydrofuran-2,3,4,5-tetracarboxylic acid 26239-55-4, N-(2-Acetamido) imino diacetic acid 26336-38-9, Poly(vinylamine) 26793-34-0, Poly(N,N-dimethyl acrylamide) 27138-57-4, Dihydroxy benzoic acid 27676-62-6 29593-08-6 29656-58-4, Hydroxy benzoic acid 29690-74-2, Poly(vinyl phosphate) 29963-76-6, Poly[2-(4-benzoyl-3-hydroxyphenoxy)ethylacrylate] 30947-30-9 31290-91-2, Cyclohexane dicarboxylic acid 33697-81-3, 3-Chloro-4-hydroxy phenyl acetic acid 33906-30-8, 2-Hydrazino benzoic acid hydrochloride 37293-51-9, Amino dextran 37337-45-4 39145-52-3 39454-79-0, Carboxymethyl hydroxypropyl guar 39537-36-5 39630-46-1, Glycyl tyrosine dihydrate 41372-08-1 50730-79-5 50852-24-9, Dihydroxy naphthoic acid 51331-09-0, Hydroxypropyl hydroxyethyl cellulose 52519-63-8, Carboxymethyl chitin 53159-92-5, 1,2,3,4-Cyclobutane tetracarboxylic acid 54057-95-3 54351-50-7 56271-99-9, .gamma.-Carboxy glutamic acid 58817-05-3 62146-88-7 64022-61-3 65259-81-6 65427-54-5, 2,4-Diaminobutyric acid dihydrochloride 67648-61-7, 2-(4-Hydroxy phenoxy) propionic acid 67845-93-6, Hexadecyl 3,5-di-tert-butyl-4-hydroxy-benzoate 68399-79-1 68781-13-5, 1-Amino-1-cyclopropane carboxylic acid hydrochloride 69676-59-1 70321-86-7 79720-19-7 80866-86-0 80997-87-1 82451-48-7 88063-74-5 91613-20-6 91613-21-7 96352-14-6, Cellulose, phenyl ether 96436-87-2

103597-45-1 106917-30-0 106917-31-1 109191-31-3,
N-(2-Acetamido) 2-amino ethane sulfonic acid 116783-26-7
122269-49-2, Ethylene oxide-isoprene block copolymer 126115-44-4
128161-59-1 134235-86-2 139011-48-6 145332-37-2 184901-84-6
196696-82-9 196696-83-0 199926-19-7 199926-21-1 199926-27-7
199926-30-2 199926-32-4 199926-33-5 199926-34-6 199926-35-7
199926-37-9 199926-38-0 199926-39-1 199926-40-4 199926-41-5
199926-42-6 199926-43-7 199926-44-8 199926-45-9 199926-46-0
199926-47-1
(ink-jet printing sheets for transparency prepn. contg.)

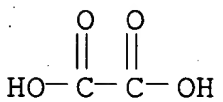
L33 ANSWER 10 OF 15 HCA COPYRIGHT 2005 ACS on STN
125:177462 Surface-modified nanoparticles and method of making and using them. Levy, Robert J.; Labhasetwar, Vinod; Song, Cunxian S. (USA). PCT Int. Appl. WO 9620698 A2 **19960711**, 170 pp. DESIGNATED STATES: W: AL, AM, AT, AU, CA, CH, CN, CZ, DE, DK, GB, HU, IS, JP, KE, LU, VN, MN, NO, US; RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, MR, NE, NL, PT, SE, NL, SN. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US476 19960104. PRIORITY: US 1995-369541 19950105; US 1995-389893 19950216.

AB Biodegradable controlled-release nanoparticles as sustained release bioactive agent delivery vehicles include surface modifying agents to target binding of the nanoparticles to tissues or cells of living systems, to enhance nanoparticle sustained release properties, and to protect nanoparticle-incorporated bioactive agents. Unique methods of making small (10 nm to 15 nm, and preferably 20 nm to 35 nm) nanoparticles having a narrow size distribution which can be surface-modified after the nanoparticles are formed is described. Techniques for modifying the surface include a lyophilization technique to produce a phys. **adsorbed** coating and epoxy-derivatization to functionalize the surface of the nanoparticles to covalently bind mols. of interest. The nanoparticles may also comprise hydroxy-terminated or epoxide-terminated and/or activated multiblock copolymers, having hydrophobic segments which may be polycaprolactone and hydrophilic segments. The nanoparticles are useful for local intravascular administration of smooth muscle inhibitors and antithrombogenic agents as part of interventional cardiac or vascular catheterization such as a balloon angioplasty procedure; direct application to tissues and/or cells for gene therapy, such as the delivery of osteotropic genes or gene segments into bone progenitor cells; or oral administration in an enteric capsule for delivery of protein/peptide based vaccines.

IT **144-62-7**, Ethanedioic acid, biological studies
9012-76-4, Chitosan
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)

RN 144-62-7 HCA

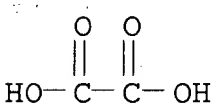
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC A61K009-51
CC 63-6 (Pharmaceuticals)
IT 50-70-4, D-Glucitol, biological studies 57-09-0, Cetyl trimethyl ammonium bromide 57-10-3, Hexadecanoic acid, biological studies 57-88-5, Cholesterol, biological studies 69-65-8, D-Mannitol 102-71-6, Triethanolamine, biological studies 112-02-7, Hexadecyl trimethyl ammonium chloride 151-21-3, Sodium dodecyl sulfate, biological studies 577-11-7, Sodium dioctyl sulfosuccinate 1069-55-2, Isobutyl cyanoacrylate 3282-73-3, Didodecyldimethyl ammonium bromide 7445-62-7 7727-43-7, Barium sulfate 8007-43-0, **Sorbitan** sesquioleate 9000-65-1, Tragacanth 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9002-92-0, Polyoxyethylene lauryl ether 9003-39-8, Polyvinyl pyrrolidone 9003-53-6, Polystyrene 9004-32-4 9004-34-6, Cellulose, biological studies 9004-35-7, Cellulose acetate 9004-44-8, Cellulose phthalate 9004-64-2, Hydroxypropyl cellulose 9004-99-3 9005-49-6, Heparin, biological studies 9015-73-0 9050-04-8, CM-cellulose calcium 9050-31-1, Hydroxypropyl methyl cellulose phthalate 10103-46-5, Calcium phosphate 25322-68-3 106392-12-5, Poloxamer 110617-70-4, Poloxamine 128835-92-7, Lipofectin 180741-27-9
(surface-modified polymer controlled-release nanoparticles for sustained drug delivery)
IT 50-02-2, Dexamethasone 59-52-9 60-00-4, EDTA, biological studies 60-10-6, Dithizone 77-86-1 77-92-9, biological studies 87-69-4, biological studies 92-84-2D, Phenothiazine, derivs. 102-71-6D, Triethanolamine, fatty acid esters 139-13-9 **144-62-7**, Ethanedioic acid, biological studies 1306-06-5, Hydroxyapatite 1338-39-2, Span 20 2462-63-7 9000-01-5, Acacia gum 9003-05-8, Polyacrylamide 9004-54-0, Dextran, biological studies 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid **9012-76-4**, **Chitosan** 10102-43-9D, Nitric oxide, compds. 11128-99-7, Angiotensin II 14930-96-2, Cytochalasin B 61912-98-9, Insulin-like growth factor 81845-44-5, Ciprostene 106096-92-8, Acidic fibroblast growth factor 106096-93-9, Basic fibroblast growth factor 114949-22-3, Activin 122647-31-8, Ibutilide 130736-65-1, U 86983
(surface-modified polymer controlled-release nanoparticles for

sustained drug delivery)

L33 ANSWER 11 OF 15 HCA COPYRIGHT 2005 ACS on STN
123:142366 Food preservatives containing Propionibacterium bacteriocins, sugars, alcohols, and carboxylates. Yajima, Mizuo (Asama Kasei Kk, Japan). Jpn. Kokai Tokkyo Koho JP 07115950 A2 **19950509** Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-289749 19931027.
AB A preservative contains a bacteriocin produced by Propionibacterium and .gtoreq. 1 compd. selected from the group comprising carboxylates, fatty acid esters, amino acids, peptides, sugars,essential oils, and alcs. For example, a bacteriocin 0.3 and Na acetate 0.5 % by wt. were added to a hamburger mixt. for preservation.
IT **144-62-7**, Ethanedioic acid, biological studies
(food preservatives contg. bacteriocins and carboxylates)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



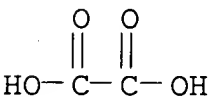
IT **9012-76-4, Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A23L003-3526
CC 17-6 (Food and Feed Chemistry)
IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 74-79-3, Arginine, biological studies 77-92-9, biological studies 87-69-4, biological studies 109-52-4, Valeric acid, biological studies 110-15-6, Butanedioic acid, biological studies 110-17-8, 2-Butenedioic acid (E)-, biological studies 110-94-1, Pentanedioic acid 124-04-9, Hexanedioic acid, biological studies 127-17-3, Pyruvic acid, biological studies **144-62-7**, Ethanedioic acid, biological studies 331-39-5, Caffeic acid 499-44-5, Hinokitiol 621-82-9, Cinnamic acid, biological studies 685-73-4D, D-Galacturonic acid, oligo- 1135-24-6, Ferulic acid 6915-15-7, Malic acid 9001-63-2, Lysozyme 25104-18-1, Polylysine
(food preservatives contg. bacteriocins and carboxylates)

IT 56-81-5D, 1,2,3-Propanetriol, esters with fatty acids 57-55-6D, 1,2-Propanediol, esters with fatty acids 64-17-5, Ethanol, biological studies 110-44-1, **Sorbic** acid 151-41-7, Lauryl sulfate 9000-69-5, Pectin **9012-76-4**, **Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)

L33 ANSWER 12 OF 15 HCA COPYRIGHT 2005 ACS on STN
123:142365 Food preservatives containing Leuconostoc bacteriocins, sugars, alcohols, and carboxylates. Yajima, Mizuo (Asama Kasei Kk, Japan). Jpn. Kokai Tokkyo Koho JP 07115949 A2 **19950509** Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-289748 19931027.

AB A preservative contains a bacteriocin produced by Leuconostoc and .gtoreq. 1 compd. selected from the group comprising carboxylates, fatty acid esters, amino acids, peptides, sugars,essential oils, and alcs. For example, a bacteriocin 0.3 and Na acetate 0.5 % by wt. were added to a hamburger mixt. for preservation.

IT **144-62-7**, Ethanedioic acid, biological studies
(food preservatives contg. bacteriocins and carboxylates)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A23L003-3526
CC 17-6 (Food and Feed Chemistry)
IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 74-79-3, Arginine, biological studies 77-92-9, biological studies 87-69-4, biological studies 109-52-4, Valeric acid, biological studies 110-15-6, Butanedioic acid, biological studies 110-17-8, 2-Butenedioic acid (E)-, biological studies 110-94-1, Pentanedioic acid 124-04-9, Hexanedioic acid, biological studies 127-17-3, Pyruvic acid, biological studies **144-62-7**, Ethanedioic acid, biological studies 331-39-5, Caffeic acid 499-44-5, Hinokitiol 621-82-9,

Cinnamic acid, biological studies 685-73-4D, Galacturonic acid, oligo- 1135-24-6, Ferulic acid 6915-15-7, Malic acid 9001-63-2, Lysozyme 25104-18-1, Polylysine
(food preservatives contg. bacteriocins and carboxylates)

IT 56-81-5D, 1,2,3-Propanetriol, esters with fatty acids 57-55-6D, 1,2-Propanediol, esters with fatty acids 64-17-5, Ethanol, biological studies 110-44-1, **Sorbic** acid 151-41-7, Lauryl sulfate 9000-69-5, Pectin **9012-76-4**, **Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)

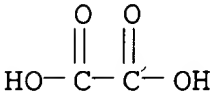
L33 ANSWER 13 OF 15 HCA COPYRIGHT 2005 ACS on STN
123:142364 Food preservatives containing Lactobacillus bacteriocins, sugars, alcohols, and carboxylates. Kanetani, Kazuo; Oshimura, Masao; Harada, Masayuki; Yajima, Mizuo (Tamon Shuzo Kk, Japan; Asama Kasei Kk). Jpn. Kokai Tokkyo Koho JP 07115948 A2 **19950509** Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-289747 19931027.

AB A preservative contains a bacteriocin produced by Lactobacillus and .gtoreq. 1 compd. selected from the group comprising carboxylates, amino acids, peptides, sugars oils, and alcs. For example, a bacteriocin 0.3 and Na acetate 0.5 % by wt. were added to a hamburger mixt. for preservation.

IT **144-62-7**, Ethanedioic acid, biological studies
(food preservatives contg. bacteriocins and carboxylates)

RN 144-62-7 HCA

CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)

RN 9012-76-4 HCA

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM A23L003-3526

CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 10

IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 74-79-3, Arginine, biological studies 77-92-9, biological studies 87-69-4, biological studies

109-52-4, Valeric acid, biological studies 110-15-6, Butanedioic acid, biological studies 110-17-8, 2-Butenedioic acid (E)-, biological studies 110-94-1, Pentanedioic acid 124-04-9, Hexanedioic acid, biological studies 127-17-3, Pyruvic acid, biological studies **144-62-7**, Ethanedioic acid, biological studies 331-39-5, Caffeic acid 499-44-5, Hinokitiol 621-82-9, Cinnamic acid, biological studies 685-73-4D, D-Galacturonic acid, oligo- 1135-24-6, Ferulic acid 6915-15-7, Malic acid 9001-63-2, Lysozyme 25104-18-1, Polylysine
(food preservatives contg. bacteriocins and carboxylates)

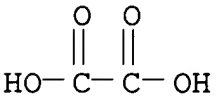
IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-55-6, 1,2-Propanediol, biological studies 64-17-5, Ethanol, biological studies 110-44-1, **Sorbic** acid 151-41-7, Lauryl sulfate 9000-69-5, Pectin **9012-76-4, Chitosan**
(food preservatives contg. bacteriocins and carboxylates and)

L33 ANSWER 14 OF 15 HCA COPYRIGHT 2005 ACS on STN
122:264096 Synergistic food preservatives containing Bacteriocin.
Yajima, Mizuo; Kanda, Toyoteru (Asama Kasei Kk, Japan; Lion Corp). Jpn. Kokai Tokkyo Koho JP 07039355 A2 **19950210** Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-206924 19930730.

AB A synergistic food preservative contains (1) Bacteriocins (for example, Nisin) produced by Lactococcus lactis and (2) .gtoreq. 1 substance selected from the group comprising carboxylic acids, amino acids, microbicidal peptides or proteins, sugars, polysaccharides, spices and essential oils thereof, and alcs. For example, Nisin 0.1, **sorbic** acid 0.1, and protamine 0.05 g were added to a mixt. of ground meat 1000, onion 300, flour 60, and water 50g, (the pH was adjusted to 5.8 with HCl or NaOH), and the mixt. was divided 30 g each, steamed 25 min, cooled, and stored at 25.degree.. This prepn. was preserved as long as 2 wk.

IT **144-62-7, Oxalic acid**, biological studies
(synergistic food preservatives contg. Bacteriocin and)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)

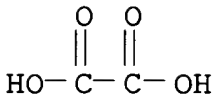


IT **9012-76-4, Chitosan**
(synergistic food preservatives contg. Diplococcin and)

RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM A23L003-3526
ICS A23B004-14; A23L003-3472; A23L003-349; A23L003-3508; A23L003-3562; C12P001-04
ICA C12P021-00
ICI C12P001-04, C12R001-225; C12P021-00, C12R001-00
CC 17-4 (Food and Feed Chemistry)
IT 24634-61-5, Potassium **sorbate**
(synergistic food preservatives contg. Bacteriocin S-50 and)
IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-87-1, Lysine, biological studies 56-89-3, Cystine, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 77-92-9, Citric acid, biological studies 79-09-4, Propionic acid, biological studies 87-69-4, Tartaric acid, biological studies 109-52-4, Valeric acid, biological studies 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-44-1, **Sorbic** acid 110-94-1, Glutaric acid 124-04-9, Adipic acid, biological studies 127-09-3, Sodium acetate 127-17-3, Pyruvic acid, biological studies **144-62-7, Oxalic acid**, biological studies 151-41-7, Lauryl sulfate 6915-15-7, Malic acid
(synergistic food preservatives contg. Bacteriocin and)
IT 64-17-5, Ethanol, biological studies 9000-69-5D, Pectin, hydrolyzates 9001-63-2, Lysozyme **9012-76-4**, **Chitosan** 25104-18-1, Polylysine
(synergistic food preservatives contg. Diplococcin and)

L33 ANSWER 15 OF 15 HCA COPYRIGHT 2005 ACS on STN
122:264095 Synergistic food preservatives containing Pediocin. Yajima, Mizuo (Asama Kasei Kk, Japan). Jpn. Kokai Tokkyo Koho JP 07039356 A2 **19950210** Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-206925 19930730.
AB A synergistic food preservative contains (1) Pediocin produced by Pediococcus acidilactici and (2) .gtoreq. 1 substance selected from the group comprising carboxylic acids, fatty acid esters, amino acids, proteins, sugars, polysaccharides, essential oils, and alcs. For example, Pediocin 0.1, **sorbic** acid 0.1, and protamine 0.05 g added to a mixt. of ground meat 1000, onion 300, flour 60, and water 50g, the pH was adjusted to 5.8 with HCl or NaOH, and the mixt. was divided 30 g each, steamed 25 min, cooled, and stored at 25.degree.. This prepn. was preserved as long as 2 wk.
IT **144-62-7, Oxalic acid**, biological studies **9012-76-4, Chitosan**
(synergistic food preservatives contg. Pediocin and)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A23L003-3526
ICS A23B004-14; A23L003-3472; A23L003-349; A23L003-3508; A23L003-3517; A23L003-3562; C12P001-04
ICA C12P021-00
ICI C12P001-04, C12R001-01; C12P021-00, C12R001-01
CC 17-4 (Food and Feed Chemistry)
IT 50-21-5, Lactic acid, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-81-5D, Glycerin, esters with fatty acids 56-87-1, Lysine, biological studies 56-89-3, Cystine, biological studies 57-50-1D, Sucrose, esters with fatty acids 64-17-5, Ethanol, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 77-92-9, Citric acid, biological studies 79-09-4, Propionic acid, biological studies 87-69-4, Tartaric acid, biological studies 109-52-4, Valeric acid, biological studies 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-44-1, **Sorbic** acid 110-94-1, Glutaric acid 124-04-9, Adipic acid, biological studies 127-09-3, Sodium acetate 127-17-3, Pyruvic acid, biological studies **144-62-7, Oxalic acid**, biological studies 151-41-7, Lauryl sulfate 6915-15-7, Malic acid 9000-69-5D, Pectin, hydrolyzates 9001-63-2, Lysozyme **9012-76-4, Chitosan** 24634-61-5, Potassium **sorbate** 25104-18-1, Polylysine 38000-06-5, Polylysine
(synergistic food preservatives contg. Pediocin and)

=> d l34 1-49 ti

L34 ANSWER 1 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Mouthwash compositions containing **chitosan** dissolved in acids or alcohols

L34 ANSWER 2 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biological pesticide based on **chitosan** and entomopathogenic nematodes

L34 ANSWER 3 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Bioabsorbable composites of derivatized hyaluronic acid

L34 ANSWER 4 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Therapeutic agents for controlling microorganisms in the throat

L34 ANSWER 5 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Preparation of light-emitting, highly reflective and/or metallic-looking images on a substrate surface

L34 ANSWER 6 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Preparation of water soluble **chitosan**

L34 ANSWER 7 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI **Chitosan** effects on blackmold rot and pathogenic factors produced by Alternaria alternata in postharvest tomatoes

L34 ANSWER 8 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI A study on the properties and utilization of **chitosan** coating. 2. Changes in the quality of tomatoes by **chitosan** coating

L34 ANSWER 9 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Weed growth-inhibiting formulations containing nonselective organophosphorus herbicides

L34 ANSWER 10 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Investigation of interaction of **chitosan** with solid organic acids and anhydrides under conditions of shear deformation

L34 ANSWER 11 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Preparation of **chitosan** from shell material

L34 ANSWER 12 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Method for the production of microcapsules

L34 ANSWER 13 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Slow release microcapsules

L34 ANSWER 14 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Relationship between solubility of **chitosan** in alcoholic solution and its gelation

L34 ANSWER 15 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Pervaporation properties of water/ethanol mixture through **chitosan** membrane. II. Effect of trace components in feed on the membrane characteristics

L34 ANSWER 16 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Pharmaceutical compositions comprising cyclodextrins

L34 ANSWER 17 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Electrochemiluminescence **oxalic acid** sensor having a platinum electrode coated with **chitosan** modified with a ruthenium (II) complex

L34 ANSWER 18 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Reactions of **chitosan** with solid carbonyl-containing compounds under shearing deformation conditions

L34 ANSWER 19 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Determination of the Degree of Acetylation of Chitin/ **Chitosan** by Pyrolysis-Gas Chromatography in the Presence of **Oxalic Acid**

L34 ANSWER 20 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Interaction between **chitosan** and solid organic acids under shear strain

L34 ANSWER 21 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Solid antimicrobial compositions as food preservatives

L34 ANSWER 22 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Manufacture of calcium carbonate solidified articles for building materials and ornaments

L34 ANSWER 23 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Deacidification of grapefruit juice with **chitosan**

L34 ANSWER 24 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI In vivo degradable medical device, composition and method for its production and process for its decomposition

L34 ANSWER 25 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Fiber-optic sensor with a dye-modified **chitosan**/poly(vinyl alcohol) cladding for the determination of organic acids

L34 ANSWER 26 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI **Chitosan**-calcium carbonate composites by a biomimetic process

L34 ANSWER 27 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Antiseptic solutions for agricultural as well as other industries

L34 ANSWER 28 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Hydrogels of chitin and **chitosan**

L34 ANSWER 29 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI A rapid method for the determination of the degree of N-acetylation of chitin-**chitosan** samples by acid hydrolysis and HPLC

L34 ANSWER 30 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biodegradable film dressing containing thermoplastic polymers

L34 ANSWER 31 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Efficient extraction of **chitosan** from fungal mycelium

L34 ANSWER 32 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biodegradable polymer compositions for implants

L34 ANSWER 33 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Polymeric compositions useful as controlled-release implants

L34 ANSWER 34 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Spherical composite particles of **chitosan** and pectin and their manufacture

L34 ANSWER 35 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Synergistic compositions containing lanthionines against gram positive bacteria

L34 ANSWER 36 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI A derivative of **chitosan** and 2,4-pentanedione with strong chelating properties

L34 ANSWER 37 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biological gels: the gelation of **chitosan** and chitin

L34 ANSWER 38 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Phosphate limited citric acid production by immobilized cells of Aspergillus niger

L34 ANSWER 39 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biodegradable system for regenerating the periodontium

L34 ANSWER 40 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Biodegradable in-situ forming implants and methods of producing the same

L34 ANSWER 41 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Aggressive chemical decontamination tests on small valves from the Garigliano BWR

L34 ANSWER 42 OF 49 HCA COPYRIGHT 2005 ACS on STN

TI A **chitosan** oxalate gel: its conversion to an N-acetylchitosan gel via a **chitosan** gel

L34 ANSWER 43 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Pervaporation separation of water/ethanol mixtures through polysaccharide membranes. III. The permselectivity of the neutralized **chitosan** membrane and the relationships between its permselectivity and solid-state structure

L34 ANSWER 44 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Fertilizers for hydroponics, comprising deacetylated **chitosan**

L34 ANSWER 45 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Membranes from ionic glycosides for separating fluids by pervaporation

L34 ANSWER 46 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Organic acid solvent systems for **chitosan**

L34 ANSWER 47 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI **Chitosan** salt gels thermally reversible gelation of **chitosan**

L34 ANSWER 48 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Chitin fibers and **chitosan** printing

L34 ANSWER 49 OF 49 HCA COPYRIGHT 2005 ACS on STN
TI Desamination of chitin and glucosamine

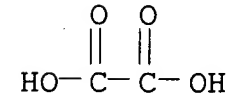
=> d l34 3,6 cbib abs hitstr hitind

L34 ANSWER 3 OF 49 HCA COPYRIGHT 2005 ACS on STN
136:172828 Bioabsorbable composites of derivatized hyaluronic acid. Sadozai, Khalid K.; Kuo, Jing-Wen; Sherwood, Charles H. (Anika Therapeutics, Inc., USA). PCT Int. Appl. WO 2002009792 A1 20020207, 52 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US40794 20010522. PRIORITY: US 2000-PV222116 20000728.

AB The present invention relates to a composite and a method for reducing post-operative adhesion of tissues. The composite includes a biocompatible, biodegradable support, and a water-insol. hyaluronic acid deriv. at the support. The hyaluronic acid deriv. includes an N-acylurea that results from crosslinking by the reaction of hyaluronic acid with a multifunctional carbodiimide. Optionally, a monocarbodiimide also may be employed. A pharmaceutically-active mol. may be added to the N-acylurea deriv. of hyaluronic acid. Although the composite includes material that prevents adhesion between tissues, in order to reduce the need for suturing when the composite is being used during a surgical procedure, a material that enhances adhesion of the composite to tissues may be applied to a surface of the composite. A method of forming the composite for reducing post-operative adhesion of tissues, including the step of applying an N-acylurea deriv. of hyaluronic acid resulting from crosslinking with a multifunctional carbodiimide, to a biocompatible, biodegradable support; a method of prepg. a drug delivery vehicle that includes a pharmaceutically-active mol. with the N-acylurea deriv. of hyaluronic acid resulting from crosslinking with a multifunctional carbodiimide; and a method of reducing post-operative adhesion of tissues are disclosed. A biscarbodiimide, p-phenylenebis(ethylcarbodiimide), and HA were reacted at a molar equiv ratio of 16.7% to yield a water-insol. gel. This gel was poured into an 8 cm x 8 cm mold under aseptic conditions. The mold contg. the crosslinked HA gel was frozen at -45.degree. and then freeze-dried for 24 h under vacuum of <10 mm. The freeze-dried sponge was compressed under aseptic conditions and cut into 4 cm x 4 cm pieces. These sponges were put in sterile pouches and sealed to keep them sterile.

IT **144-62-7D, Oxalic acid,** polymers contg.
9012-76-4, Chitosan 9012-76-4D,
Chitosan, derivs.
(bioabsorbable composites of derivatized hyaluronic acid)

RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



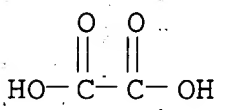
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61L031-12

ICS A61L031-14; A61L031-10; A61K047-36; C08B037-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 33
IT **144-62-7D, Oxalic acid**, polymers contg.
538-75-0D, reaction products with hyaluronic acid 2491-17-0D, reaction products with hyaluronic acid 9002-89-5, Poly(vinyl alcohol) 9003-01-4, Poly(acrylic acid) 9003-39-8, PVP 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, derivs. 9004-61-9D, Hyaluronic acid, derivs. **9012-76-4, Chitosan 9012-76-4D, Chitosan**, derivs.
22572-40-3D, reaction products with hyaluronic acid 24980-41-4, Polycaprolactone 24991-23-9 25038-54-4, Nylon 6, biological studies 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 25513-46-6, Polyglutamic acid 25608-40-6, Poly(L-aspartic acid) 25734-27-4, Nylon 2 25736-32-7, DL-Glutamic acid homopolymer, SRU 25952-53-8D, reaction products with hyaluronic acid 26009-03-0, Poly(glycolic acid) 26009-03-0D, Polyglycolide, derivs. 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26023-30-3D, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)], derivs. 26063-13-8, Poly(L-aspartic acid) 26100-51-6, Poly(lactic acid) 26124-68-5, Poly(glycolic acid) 26202-08-4D, Polyglycolide, derivs. 26680-10-4D, Polylactide, derivs. 27881-01-2, Poly(D-aspartic acid) 27881-03-4, Poly(DL-aspartic acid) 27940-72-3, Poly(D-aspartic acid), SRU 27940-74-5, Poly(DL-aspartic acid), SRU 28728-97-4, Poly(hydroxybutyric acid), SRU 34346-01-5, Glycolic acid-lactic acid copolymer 49717-32-0, DL-Glutamic acid homopolymer 56549-52-1, Poly(butylene diglycolate) 90409-78-2, 1,3-Bis(p-carboxyphenoxy)propane-sebacic acid copolymer 99896-85-2D, polymers contg. 114959-05-6, Poly(4-hydroxybutyric acid) 134736-12-2D, reaction products with hyaluronic acid 146878-66-2D, Polydihydropyran, derivs. 396077-51-3D, reaction products with hyaluronic acid 396077-52-4D, reaction products with hyaluronic acid 396077-53-5D, reaction products with hyaluronic acid 396077-55-7D, reaction products with hyaluronic acid 396077-56-8D, reaction products with hyaluronic acid 396077-57-9D, reaction products with hyaluronic acid 396077-58-0D, reaction products with hyaluronic acid 396131-99-0D, reaction products with hyaluronic acid
(bioabsorbable composites of derivatized hyaluronic acid)

L34 ANSWER 6 OF 49 HCA COPYRIGHT 2005 ACS on STN
135:200434 Preparation of water soluble **chitosan**. Li, Gaolin (Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1283634 A 20010214, 4 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 2000-113649 20000828.
AB A **chitosan** used in antitumor agents is prepd. by washing shells, dipping in 4-10% HCl for 1-2d, washing with water, boiling in 8-12% NaOH soln. to remove protein and fats, dipping in 10- 15%

HCl to remove CaCO3 and Ca3(PO4)2, washing with water, decoloring with 1% KMnO4 soln., removing MnO2 in 1-3% NaHSO3 soln., bleaching with 1-4% **oxalic acid**, treating in 55- 70% NaOH soln. at 75-95.degree.C for 10-20 h, dissolving in 3-6% acetic acid soln., mixing with alkali, cooling, hydrolyzing for 2-4 h, neutralizing with HCl, filtering, and washing.

IT **144-62-7, Oxalic acid**, processes
(prepn. of water sol. **chitosan**)
RN 144-62-7 HCA
CN Ethanedioic acid (9CI) (CA INDEX NAME)



IT **9012-76-4, Chitosan**
(prepn. of water sol. **chitosan**)
RN 9012-76-4 HCA
CN Chitosan (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM C08B037-08
CC 63-6 (Pharmaceuticals)
ST **chitosan** water soluble prepn
IT Antitumor agents
Hydrolysis
(prepn. of water sol. **chitosan**)
IT 64-19-7, Acetic acid, processes **144-62-7, Oxalic acid**, processes
(prepn. of water sol. **chitosan**)
IT 1310-73-2, Sodium hydroxide, reactions 7631-90-5, Sodium bisulfite 7647-01-0, Hydrochloric acid, reactions 7722-64-7, Potassium permanganate
(prepn. of water sol. **chitosan**)
IT **9012-76-4, Chitosan**
(prepn. of water sol. **chitosan**)

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L35 1017 SEA BIOADSORB? OR BIOADSORP? OR BIOABSORB? OR BIOABSORP? OR BIOCHEMISORB? OR BIOCHEMISORP? OR CHEMIBIOSORB? OR CHEMIBIOSORP?
L36 1 SEA L13 AND L35
L37 1 SEA L36 NOT (L32 OR L33)
L38 1 SEA L37 AND (1900-2000/PRY OR 1900-2000/PY)

L39 0 SEA L38 NOT L34